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CÆSAREAN SECTION AS AN OPERATION OF ELECTION. WITH THE REPORT ON A CASE.*

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The Journals both in this country and abroad have abounded for the last decade with literature on and reports of cases of Cæsarean section. The great prolificness of this literature has been due to the dramatic interest connected with these cases and to the great evolution from the traditionary operation of Cæsar's time to the operation of today, performed in the light of our knowledge of modern surgical technique and aided by modern surgical appliances.

When it is taken into consideration that by actual measurement about 10 per cent. of all the white women in America have contracted pelves, and that 2 per cent. are contracted to such an extent as to mechanically obstruct the delivery of the child and to demand some operative procedure, and that on the selection and election of this operative procedure and the promptness with which it is done depend the life of frequently the mother and more frequently the child, we cannot but be impressed with the vital importance of this subject to the general practitioner, who, certainly throughout our Southern country, most frequently encounters these cases.

Dr. Kelley has divided the operation into (1) those cases in which the indications for Cæsarean section are absolute, and (2) those in which the indications are relative. Of the cases of the first class I shall say very little, but want to emphasize the importance of an early

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diagnosis in this class as well as in the second as on this fact depends to a large extent the result of any operation.

1. Absolute indications for Cæsarean section are when the child is alive in a flattened pelvis in which the true conjugate is 6.5 centimetres (2 5-8 inches) or less, or in uniformly contracted pelvis of 7.5 centimetres (3 inches) or less, or when the child is dead in a pelvis measuring 4.5 centimetres (1 3-4 inches) or less, and in certain cases of complete atresia of vagina and cervix, caused by cicatricial bands. The operation is also absolutely indicated where the mother is moribund or has just died.

The indication for Cæsarean section is relative when the child is alive in a pelvis measuring from 7 or 7.5 centimetres (2 4-5 or 3 inches) to 9.5 centimetres (3 4-5 inches), in which case the operation comes in competition with symphysiotomy—turning or version—the induction of premature labor, and craniotomy.

The indication is also relative in complete placenta prævia before collapse from hæmorrhage has occurred.

Just on the border line between the relative and the absolute indications and merging into both are certain cases of cicatricial bands of the vagina and cervix. When the cicatricial bands are confined to the vagina and the vaginal vault the indication for Cæsarean section is relative, but when the bands are so extensive and dense as to completely occlude the vaginal and cervical canals, the indication for Cæsarean section is absolute.

We will consider the pros and cons of Cæsarean section and the different operations with which it comes into competition:

1. Symphysiotomy.—This operation is not applicable to any case with a conjugate of less than 7 centimetres (2 4-5 inches). Not infrequently mistakes have been made and symphysiotomy done in pelvis with smaller diameters when it had to be supplemented by craniotomy. In favorable cases—that is, cases which are not exhausted by prolonged labor or which are uninfected, the statistics show a larger maternal mortality in this procedure than does Cæsarean section on the same class of cases; and of course the infantile mortality is greater, for there is no procedure in which the infantile mortality is so small as in Cæsarean section. Symphysiotomy is not infrequently attended with serious injuries to the soft tissues and followed by a loss of locomotion from a permanent mobility of the pelvic bones, so that the Sænger-Cæsarean section would certainly seem the rational elective procedure in the favorable cases of this class. On the other hand, in unfavorable cases, where there is exhaustion from prolonged labor or where infection exists, symphysiotomy comes in competition with the Porro-Cæsarean section or lapero hysterectomy, and symphysiotomy has

a smaller maternal and a larger infantile mortality. Taking into consideration the potentiality of the mother as compared with that of the unborn child, and the larger mortality to the mother from the Porro-Cæsarean section, the symphysiotomy would be the rational operation. This narrows the selection of symphysiotomy down to the cases with conjugates of from 7 to 8.5 centimetres (2 4-5 to 3 4-5 inches), which have become exhausted by prolonged labor or which are infected; and I believe that this is a class of cases which should not exist and would not exist if careful digital examinations and pelvic measurements were made in every primipara; and in every multipara whose history was suspicious of contracted pelvis.

2. Cæsarean section comes in competition with turning or version followed by immediate delivery in cases where the conjugata vera is from 8.5 to 9.5 centimetres (3 2-5 to 3 4-5 inches), or if the child's head be very small it may be successfully done in generally contracted pelvises of 7.5 centimetres (3 inches). The dangers of this procedure are principally to the fœtus, though it is not infrequent to have quite extensive lacerations of the soft parts. The principal restriction to the selection of this procedure is the fact that it is only applicable when the conjugate is 8.5 centimetres (3 2-5 inches) or more.

3. The induction of premature labor may be elected when the fœtus is viable between the 28th and 36th weeks in pelvis measuring 6.5 to 8 centimetres (2.6 to 3.2 inches). The maternal mortality resulting from this procedure has, within the last few years, since the general introduction of modern surgical technique, been very much reduced, but the enormous fœtal mortality of 50 per cent. should be a strong argument against it when it is taken into consideration that such cases would at term come under the favorable class for Cæsarean section in which both the maternal and infantile mortality is almost nil.

4. Craniotomy should only be selected when the child is dead and the conjugate is 4.5 centimeters (1 3-4 inches) or more. This procedure should never be resorted to if the child is alive, but symphysiotomy, the Säger or Porro-Cæsarean section selected according to the indications mentioned above.

5. In complete placenta prævia, if the operation be done before collapse from hemorrhage, Cæsarean section would offer a better chance both to mother and child than delivery per viam naturales.

6. There is one other class of rare cases in which the indication for Cæsarean section is relative. These are cases referred to above, of extensive and dense cicatricial bands of the vagina which may cause complete atresia and absolutely obstruct the exit of the child. There have only been a few of these cases reported, and in most of them Cæsarean section has been elected, but free incision of the cicatrices has been done with successful issue in some instances and the

possibility of success from this procedure should be carefully considered before the Cæsarean section is done.

The Porro-Cæsarean section comes in competition with symphysiotomy in infection and exhaustion under the conditions mentioned above. The indication for the Porro- or Laporo-hysterectomy is absolute where there is cancer of the cervix; where the uterus contains large myomata which cannot be removed by myomectomy; when on account of uterine inertia there is uncontrollable hemorrhage from site of placenta; and where bilateral ovarian tumors exist which have destroyed all healthy ovarian tissue.

To recapitulate, we have seen that in the 2 per cent. of obstetrical cases demanding surgical interference the elective, predetermined, conservative Säger-Cæsarean section in the vast majority of instances offers the most favorable prognosis to the mother and child of any procedure whatsoever, but I wish to emphasize the word "elective."

Grandin and Jarman say in their work entitled Practical Obstetrics, "There is no obstetric operation in which elective surgery plays a greater role in determining the prognosis than in Cæsarean section. Elective Cæsarean section, so simple and so accurate is its technique, subjects the woman to but one risk, and that is septic infection. On the other hand, when it is only determined on after forceps and version have failed, the woman being exhausted and the child as well, the mortality rate is necessarily high."

It will take time to disabuse the minds of the laity and some of the profession of the dread of Cæsarean section inspired by the exceedingly large and almost prohibitive maternal mortality in the past, due to poor and imperfect technique and to the fact that the operation was usually employed as a dernier resort after all others had been tried and had failed, and the mother was exhausted and probably infected.

Drs. Grandin and Jarman give the mortality of the Säger-Cæsarean section as being from nil to 10 per cent., depending on whether the operation is elective.

Dr. H. C. Coe, of New York, has collected 26 operations on 13 women performed by 16 different surgeons with a maternal mortality of 11.4 per cent.

The statistics of the Braun clinic in Vienna show 74 Cæsarean sections—34 conservative operations with 34 living children, and 8.1 per cent. maternal mortality, and 40 Porro operations with maternal mortality of 11.8 per cent. and 5 per cent. for the children.

A resumé of Leopold's, Ohlshausen's and Sweifel's statistics—the first two having nearly 100 cases—show a maternal mortality from the conservative operation of 5.8 per cent. and 3.7 from the Porro.

Dr. Pinard, of Paris, has reported 106 cases of symphysiotomy with a maternal mortality of 5 per cent., and infantile mortality of 6 per cent. He favors Cæsarean section because he says it is an easy operation, which can be done at the beginning of labor before infection of the mother or injury of the child has occurred.

Dr. Edward Reynolds, of Boston, has collected 89 cases, 15 of which were his own, in which the operation was elective, with no maternal mortality; while in 61 unfavorable cases the mortality reached the enormous percentage of 33.3 per cent.

The statistics given above demonstrate conclusively that Cæsarean section compares most favorably with any operation as regards both maternal and infantile mortality, but we also see that there is a vast difference between the elective operation and the operation in the unfavorable cases. The question arises, how can we overcome the danger of anti-operative exhaustion and give our patients the benefit of an elective operation? The answer is, by careful and thorough examination a few weeks before labor by external palpation, digitally and with the pelvimetre of every primipara, and of every multipara whose previous confinement or confinements lead to the suspicion of mechanical obstruction.

At Johns Hopkins and in all maternity hospitals this is routine work, and in all medical colleges pelvimetry is now taught as thoroughly as is the application of forceps. By means of careful examination and mensuration before labor we are enabled to discover the abnormal pelves, and while frequently we may not be able to say positively that a woman cannot be delivered per vias naturales, still we are forewarned and can prepare ourselves for any emergency.

Dr. Reynolds lays down the following rules: That in a primipara an unusually high or inaccessible position of the head at the beginning of labor should be regarded as ground for consultation; and that in a multipara who has once lost a child in difficult labor or from the application of forceps or turning, the question of a major operation should always be taken up during the next pregnancy and a consultation be held a few weeks before delivery at the latest.

Careful examination and mensuration before labor or in their absence adherence to the rules laid down by Dr. Reynolds will, in my opinion, steer us away from many a Scilla and Charybdis.

The case I have to report was not one of election and the indication for its performance was absolute.

I saw this case in consultation with Dr. Lupton and Dr. E. W. Morris about 5 o'clock in the afternoon of the 14th of January. It was Dr. Lupton's case, and he told me before I saw her that he thought it was a case of atresia of the vagina, but that the patient was suffering

so intensely and was so extremely sensitive that he had been unable to make a satisfactory examination.

With all due respect to Dr. Lupton, I should not have been at all surprised to have heard the plaintive wail of a young infant when I drove up to the house, but such was not the case. I found a girl 19 years old, a primipara who had been in labor since 4 o'clock the afternoon before. Here general condition was fairly good, pulse 110, and she was complaining of the most intense and constant pain. I attempted to make a vaginal examination, but found it would be impossible without an anæsthetic, so chloroform was administered. We then discovered that there was no vagina, and that after passing the labia minora the finger ran against a hard, dense, inelastic wall which felt imperforate. This wall was so thick, dense and inelastic that nothing positive could be determined about the condition of the cervix, though I thought I could feel it hard and undilated. Retracting the labia the imperforate white connective tissue wall was perfectly visible. The foetal heart was distinct and strong. Examination of the abdomen showed that the presentation was probably an occiput to the left anterior. On inquiry it was found that shortly after conception occurred a physician was employed to induce a criminal abortion and that for a period of about two months or more he had made systematic applications to the os-cervix and vagina of cauterants, which patient said had caused her great pain and kept her in bed most of the time.

We held a consultation and Cæsarean section was decided on and the woman sent into the sanitarium.

I began the operation at 8 o'clock, twenty-eight hours after the beginning of labor. A median incision was made through the linea alba about twenty centimeters in length, one-third being above and two-thirds below the umbilicus. After the cavity was opened and the uterus exposed, I attempted to locate the placental site, but, failing to do so, I made a median longitudinal incision into the uterine cavity. If I had made measurements and tried to do so I could not have struck the center of the placenta more accurately. Quickly separating it from the uterine walls with my fingers, I ruptured the amniotic sac, having the margins of the abdominal incision compressed by an assistant against the sides of the uterus to prevent escape of amniotic fluid into the abdominal cavity. After amniotic fluid had escaped the uterine arteries were grasped by an assistant and I made a rapid delivery of the child, which I turned over to a nurse, who resuscitated him, though not without some difficulty. The placenta was then delivered, after which I explored the cervix from above. I found it undilated and hard and apparently occluded. I then had an assistant press his finger against the thinnest point in the fibrous septum, which was about its

center, and with my finger in the internal os I made an incision through the cavity and the fibrous septum in the vagina, having the bistary withdrawn through the vagina. I then passed a 2 1-2-inch eight-layer gauze drain from the internal os through the cervix into the vagina. By this time the uterus was firmly contracted and the incision was closed by first a layer of strong silk suture which included the muscularis from just beneath the peritoneum to just external to the mucosa. I tried with these sutures to coapt the muscular margins of the incision perfectly, leaving no pockets for the accumulation of blood. I did not use any catgut coaptation sutures for the reason that I was out of cumolized gut and was afraid to use any other. I mention these details because it was due to this accident that the patient had any after trouble. The peritoneal layers were then coapted by Lembert silk sutures and the abdominal incision closed in layers. During the entire operation, which embraced about fifty minutes, the woman did not lose any more blood than is ordinarily lost in a normal confinement. Patient's pulse, when she was taken off the table, was good and less than 100.

The gauze drain left in the uterus was removed the next day after the operation, the vagina irrigated with 1-1000 bichloride solution, and the uterus with sterile normal salt solution, after which the gauze drain was reintroduced into the uterus. This was repeated daily until the 31st, seventeen days after the operation. The patient had very little shock after the operation, and began taking nourishment the next day. Bowels were moved freely on the second day, pulse ranged from 76 to 88 and temperature from normal to 100, or a little over, the latter slight elevation being attributed to the absorption of blood clots, as was indicated by the fact that it would drop to normal after the uterine irrigation.

This condition continued until the 26th, twelve days after the operation, when the temperature went up to 101.2 and pulse to 90. Temperature and pulse continued to go up till the evening of the 31st, when the temperature was 103 degrees and pulse 110. During this time an anæsthetic was twice administered, thinking the condition was due to closure of cervix and imperfect drainage, but nothing could be found at either time to corroborate this hypothesis. The abdominal suture which was a continuous subcutaneous silver wire, was removed on the eleventh day, and the incision was closed per primam with no induration nor the slightest evidence of infection.

On the morning of February 1, eighteen days after the operation, the abdominal dressing was found saturated with offensive pus, which had broken through the lower angle of the incision and had come from the uterine wall. This abscess was certainly not due to infection at the

time of the operation, as is conclusively proven by the history; and my theory is that the silk sutures introduced into the muscularis uteri did not perfectly coapt the uterine incision and admitted of a pocket in which a blood clot accumulated, which afterwards broke down and suppurated. The patient's temperature and pulse immediately dropped to normal, and have remained so ever since.

Patient was out of bed on the twenty-fourth day, and the abscess cavity had granulated up perfectly forty-five days after the operation.

In conclusion, I might mention that Julius Cæsar has thriven and developed daily up to the present time.

I was very greatly assisted in this operation by Drs. Lupton, D. E. Drennen, Worcester, and E. W. Morris, who administered the anæsthetic.

INTUBATION AND ANTITOXINE.

By S. L. LEDBETTER, M. D.

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My object in writing this paper is to call attention to the revolution which has followed the introduction of antitoxine into our therapeutics, and to add my quota to the statistics which so abundantly support its claims to superiority over all other remedies in diphtheria.

The relative percentage of recoveries following intubation and tracheotomy for diphtheritic croup, prior to the introduction of antitoxine and since, is an unanswerable argument in favor of antitoxine.

There was, during the first few years of its use, a great deal of skepticism in the medical world as to the final outcome, but that has melted away, and the few who are still skeptical are men who have not used the remedy.

A few years before the introduction of antitoxine, intubation was seeking recognition as a substitute for tracheotomy in diphtheritic croup. For a number of years physicians were slow to take it up, and only during the last few years has it begun to be accepted as THE operation.

It seems to be a singular fact that the use of antitoxine has aided largely in popularizing intubation, while, in turn, intubation has done more than anything else to prove the truthfulness of the claims made by advocates of antitoxine.

For twelve years I have been doing intubation for membranous or diphtheritic croup. I shall not take up the bacteriology and pathology of the disease—as to whether there are two types, or only one.

So, without reference to bacteriology, I have been doing intubation where there was a croupous dyspnœa demanding relief. Do not under-

stand that I am opposed to bacteriology or making accurate diagnosis, for I invariably take cultures and have examinations of secretions from the throats of all my cases, where it is possible to do so, for the sake of science and that I may know what course to pursue with reference to isolation and disinfection. This I do as a secondary affair, the relief from the dyspnoea and the the administration of antitoxine coming first.

When the deposit in the pharynx is doubtful in character and there is no croup, I wait for an examination, if it can be gotten in a reasonable time.

Before the introduction of antitoxine, I can remember having seen but one case of diphtheritic croup that did not eventually require an operation. In that instance I sat up with the patient four nights. The deposit was a small one—not larger than a finger nail—and by various means the membrane was successfully detached four or five different times, when it seemed that an operation was inevitable.

Since the introduction of antitoxine I have seen a number of cases where the patient has been tided over the danger point without an operation. So that now if the dyspnoea is not very great, and the patient is accessible, I give antitoxine and await results. Still, I am not in favor of taking much risk, for if the case would recover without a tube it would almost assuredly recover with it, and I feel much safer when I go away leaving the patient with a tube in his throat.

Before the antitoxine period my intubation cases gave me a great deal of trouble and caused me to lose sleep; for whenever I had a patient with a tube in his throat I would lie awake nights listening for the door bell to ring. Now I put in a tube, administer antitoxine and go home counting on not being disturbed again until the time comes for the removal of the tube, and my experience is the same as that of all other reporters.

Now, the record in all the children's hospitals of the large cities and the case books of the paediatric surgeons show from 70 to 85 per cent. of recoveries; whereas formerly they only showed from 15 to 40 per cent. of recoveries from their intubation cases.

In my case book I have a record of forty intubations where antitoxine was not used, with thirteen recoveries, or 30 per cent. Twenty-six cases in which antitoxine was used gave twenty-one recoveries, or 80 per cent.

A few of these cases in both lists were, perhaps, not diphtheritic, but were treated as such; no difference was made in favor of the one class as against the other.

I have records of a number of cases where I was called with a view to intubation, which I have not included in my statistics, but they were all in the list of prae-antitoxine cases. For example, I mention two

cases where tracheotomies were done, because the tubes were repeatedly coughed up, as I did not, at the time, have proper size tubes. Of course, these cases could not be charged against intubation. There were other cases in which the patients were dying when I arrived, and in some the tubes were inserted hurriedly, but the patients died before the tubes could be gotten into place. Sometimes the patient would be dead when the operation was completed; sometimes there would be a few gasps, but respiration never properly established. In some of these cases it was impossible to tell whether the patients were dying of dyspnoea or from some other cause. But, eliminating all such cases, the results show still an enormously increased percentage of recoveries in antitoxine cases.

That you may get some idea of the relative progress and results in the two classes, I will read a report of a few cases from each class, taking them just as they were recorded in my case book, and not selected.

Case 1.—Child of L. P. W.; white; age 2 years; diphtheritic deposit in the nose and pharynx; breathing very hard; intubation. Case did well for forty-eight hours, then the breathing began to be labored again. The tube was removed, but in a short while the breathing was so hard that the tubes had to be replaced. Dyspnoea not being relieved, the tube was again removed, breathing getting more labored all the time. Symptoms finally became so urgent that a rapid tracheotomy was done. Hemorrhage copious. Patient never rallied and was dead in a few minutes after opening the trachea.

Case 2.—Child of Mr. Kilgour; age 2 years; croupous laryngitis; heavy, creamy exudate from posterior nares; no membrane visible in pharynx; dyspnoea very considerable. Intubated. Child did well till following day, when temperature reached 104.2 degrees; rapid respiration; breathing labored;; child grew rapidly worse. The tube was not affording any relief, so it was removed. Patient died an hour or two later, on third day of intubation.

Case 3.—Child of Mrs. Brooks; age 2 years; croupy for two days. Intubated. Patient did well for eighteen hours, after which the breathing began to be very labored; child very restless; tube was removed by the father; child died about an hour later.

Case 4.—Child of Mrs. Glenn; age 1 year; badly nourished, bottle-fed child, and I expected trouble. There was a deposit on both nostrils; profound dyspnoea, which was entirely relieved by tube. Tube was coughed up following night; breathing very hard; tube replaced and remained until some time next day, when it was again coughed up. A larger size tube was inserted and there was no further trouble. The child's condition was bad; respiration 60; pulse 170. Strychnia was

used freely; condition improved steadily. Tube was removed on fifth day, and child recovered.

Case 5.—Child of Italian parentage; age 2 1-2 years; diphtheritic deposit on the pharynx; croup. Intubated. Child did well till fourth day when symptoms of bronchial complication became manifest; breathing growing more labored; tube removed and replaced two or three times, but condition remained unchanged, and child died on fifth day.

Case 6.—Child of Mr. Davis; age 1 1-2 years; deposit on pharynx; croup. Intubated. Dyspnoea relieved; began to have some dyspnoea again on fifth day; removed tube on sixth day, but had to replace it. Pharyngeal deposit, which had disappeared on third or fourth days, had reformed; condition grew steadily worse, and child died at end of seventh day. Extension and general exhaustion.

Case 7.—Colored child; age 2 1-2 years; croup; small deposit on both tonsils. Intubated. No special complication. Tube removed fourth day. Recovery.

Case 8.—Child of Mr. Paul, just arrived from Pittsburg. Extensive pharyngeal deposit; croup. Intubated. Child grew steadily worse and died two days after intubation.

Case 9.—Second child of Mr. Paul, developed the disease while older child was sick; began to be croupy on third day; dyspnoea increased until it became necessary to intubate. For two days the breathing was good, then dyspnoea returned, and was not improved by removal of tube or by its reintroduction. Tracheotomy was decided on; child's condition grew so rapidly worse while preparing for tracheotomy that it became necessary to operate very hurriedly. Child was dead by the time the opening was established.

Case 10.—Child of Mr. Vose; age 9 years; diphtheritic croup. Intubated. Child did well two days, then the tube began to choke up; evidence of detached membrane below tube; breathing so badly that it was necessary to remove tube, which apparently gave slight relief for short while, when it became necessary to replace it; tube shoved membrane down in front of it; situation critical; removed tube; condition unchanged; child dying. Did rapid tracheotomy with pocket knife; immediate relief, but child died two days later. General septicæmia, toxæmia and extension of membrane.

Case 11.—Child, age 4 years; pharyngeal deposit; croup. Intubated. Several bad spells of dyspnoea during first two days; put in larger tube; condition much improved; third day child was being fed; coughed; sudden dyspnoea; died in a few minutes.

Case 12.—Child of Mr. Chew, at Elyton; diphtheritic croup. Intubation. No complication; child recovered.

Now, for comparison, I will give you a few of the cases in which antitoxine was used:

Case 1.—Child of Mr. Battsford, Pratt City. Diphtheritic croup. Intubated and administered antitoxine. Dyspnoea relieved; tube removed fourth day, but considerable stridulus and dyspnoea developed. This was clearly from oedema and spasm, but I was unwilling to leave child in this condition, so replaced tube same evening. Three days later removed tube again. Child recovered without complication.

Case 2.—Child of Mr. McL., Saginaw; age 6 years; diphtheritic croup; pharyngeal deposit. Intubated. No complications; tube removed fourth day; symptoms of dyspnoea soon began to develop and tube was replaced; tube removed two days later; condition entirely satisfactory; recovered; 3,000 units antitoxine used.

Case 3.—Child of Mr. Goodman; diphtheritic croup, with deposit in pharynx. Intubation. Antitoxine; no complication; tube removed fourth day; child recovered.

Case 4.—Child of Mr. Oxley (Wylam); 1 1-2 years old; membranous laryngitis. Intubated. Gave 2,000 units antitoxine; child never developed any unfavorable symptoms; tube removed fifth day; condition satisfactory; child made good recovery.

Case 5.—Male child of Mr. Allison, Pratt City; age 3 years; diphtheritic croup; dyspnoea intense. Intubated. Gave 2,000 units antitoxine; condition perfectly satisfactory; removed tube fourth day; breathing not entirely satisfactory, but did not consider symptoms sufficiently urgent to replace tube; was called back a few hours later; dyspnoea extreme. Intubated. Removed tube three days later; child recovered without complication.

Case 6.—Child of Allen Falkner, of Gate City; age 2 years; general diphtheritic deposit in larynx, pharynx and posterior nares; had been sick three or four days. Intubated. Antitoxine 3,000 units; child took no nourishment and died second day after intubation from toxemia, breathing not being disturbed.

Case 7.—Child of Mr. Weisinger; age 4 years; membranous laryngitis. Intubated. Gave 2,000 units antitoxine; tube remained five days; no complication; recovery.

Case 8.—Child of Mr. Warble; age 4 years; membranous laryngitis; pronounced dyspnoea; condition very critical. Intubated. 2,000 units antitoxine given. Next day two large masses of membrane were coughed up after severe paroxysms of dyspnoea; no further trouble; removed tube fourth day, but had to reintroduce it. Tube was again removed three days later, when condition had become entirely satisfactory; child made good recovery.

Case 9.—Child of Mr. Fletcher Ware; age 7 years; sore throat four

or five days before seen by physician; diphtheritic laryngitis. Intubated. Antitoxine administered; large piece of membrane coughed up after introduction of tube, after which there were never any other unfavorable symptoms; child recovered.

Case 10.—Child of Mr. Baker; age 16 months; membranous laryngitis; no pharyngeal deposit. Intubated. Antitoxine administered; no complications; tube removed on fourth day; recovery. Later the other child of family developed same symptoms; antitoxine administered by Dr. Robertson, the family physician; symptoms subsided without the necessity of tubes.

And so the cases run. These, as I have said, are not selected, but taken as they are recorded in case book. So in all cases of diphtheritic croup where antitoxine is administered early, intubation becomes an exceedingly satisfactory procedure, and in many cases is not needed at all.

AMPUTATION ABOVE THE KNEE UNDER ANALGESIA FROM SPINAL SUBARACHNOIDEAN COCAINIZATION.*

Reported by C. A. Fox, M. D.,

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During the past year many minor operations and a few major operations have been performed under the so-called Bier's Spinal Narcosis, produced by injecting cocaine into the cerebro-spinal canal at the fourth inter lumbar space.

Both in this country and in Europe Dr. Bier has been awarded the distinction of priority in this procedure. And though he no doubt is entitled the credit of originality in its discovery, an American surgeon, Dr. J. Leonard Corning, of New York City, † as early as October 31, 1885, reported a case of complete anæsthesia of the lower portion of the body, produced by the injection of cocaine into the subarachnoid space of the spinal cord, and is therefore entitled to the distinction of equal originality and certainly to priority.

Dr. Corning demonstrated that analgesia could be produced by injecting cocaine into the spinal canal, and suggested a method of treatment for painful diseases of the spinal cord, but failed to consider the surgical application of the method.

*Report of clinic of Dr. J. D. S. Davis, at St. Vincent Hospital, for the medical class of Birmingham Medical College.

†New York Medical Journal, Oct. 31, 1895.

Journal of Obstetrics and Diseases of Women and Children, February 1901; Cocainization of the Spinal Cord by means of the Lumbar Puncture During Labor, by Dr. Wm. R. Stone, of New York City.

Notwithstanding the fact that the general anæsthetics in constant use by the profession have proved such a blessing to humanity and are practically harmless, the medical profession took fright at the first death from chloroform and has ever since been constantly looking for an anæsthetic that might be administered without danger. When ether was proven dangerous to life and nitrous oxide impracticable as a general anæsthetic for major operations, and unsatisfactory for very short minor ones, the enthusiasm of the profession for a safe, reliable, general anæsthetic increased until investigators tried and advanced the special merits of various methods of producing partial or general anæsthesia until subarachnoidean spinal analgesia was discovered.

The case I show you today is Mr. R. M. L——, a farmer, aged 55 years, very much emaciated and has a very dirty, malignant looking ulcer that covers the entire lower third of the left leg and the dorsum of the foot to the toe line, and has a chronic bronchitis. This patient is a religious enthusiast and has perfect confidence in everything that may be done for him as providential, and while willing to submit to any procedure he has requested that this method of spinal anæsthesia be administered to him to amputate his leg. The patient's left knee is partially anchalosed in flexion with the underlying soft structures very much contracted, and the leg cannot be moved without much suffering.

After a careful study of the methods of cocainization of the spinal cord I have come to the conclusion that the method practiced by Dr. Wm. R. Stone, in the New York City Maternity Hospital, is very practical and safe, and I will proceed to demonstrate it on this case.

For convenience I have prepared here an aqueous solution of cocaine hydrochlorate, made so that ten minims equal one-sixth of a grain of the salt. This solution has just been prepared before you and was sterilized by placing it in a test tube, which was put in boiling water for two minutes, and then strained through several layers of sterilized gauze into another test tube. Dr. Stone says: "This does not destroy the virtue of the drug, but destroys the activity of pathogenic organisms."

In injecting this solution it would seem best, in order that the pressure within the cerebro-spinal canal might not be altered, that as much cerebro-spinal fluid should be permitted to escape as is injected—i. e., if ten minims be injected, ten drops of cerebro-spinal fluid shall have previously come from the needle. "Most patients," Dr. Stone says, "will permit the introduction of the cocainizing needle without a local anæsthetic. But where this is too painful, a spray of ethyl chloride will do away with all pain. Now after sterilizing this ordinary metal hypodermic syringe with a needle three times the size of an

ordinary hypodermic needle, by boiling in water, I draw a double portion of the cocaine solution (twenty drops) into the syringe. The patient's back has been prepared before you by scrubbing the back from coccyx to the middle of the dorsal vertebræ with tincture of green soap and water, then a saturated solution of permanganate of potassium was applied to this region, which was in turn decolorized by a saturated solution of oxalic acid. This was followed by a 1:1000 solution of bichloride of mercury, and sterilized towels were placed over the area thus prepared, so that the injection can be performed when I am ready to do so."

The best syringe for injecting the cocaine solution is one of solid metal barrel and piston, which can be thrown into water and sterilized by boiling as you have witnessed. The needle should be about nine centimeters long, of quite fine caliber, and so made that it can be attached to the syringe by a little twist, that it may with greater gentleness, be attached (after letting out the spinal fluid) than if attached by threads on syringe.

To facilitate the introduction of the needle the patient should be either in the bicycle position or in the extreme or exaggerated Sims position, that the spinous processes of the lumbar vertebræ may be made more prominent.

This patient can sit up, and I will get him to sit in the bicycle position while the back is further sterilized by ether and then alcohol. I now locate the sacro-vertebral articulation (which is the posterior landmark in Baudelocque's external pelvic conjugate), and place the ball of my left thumb upon the spinous process of the first vertebra above, which is the fifth lumbar, and this brings the tip of my thumb on the spinous process of the fourth lumbar vertebra. I next introduce the needle just outside my thumb, between the fourth and fifth lumbar vertebræ, at an angle of thirty degrees, from without inward and from below upward. By this means the spinous processes are escaped, and by the slanting direction of the needle I am able to get under the eaving of the lamina of the fourth over the lamina of the fifth. The needle should be slowly introduced until the fluid runs out of it as you can now witness. I permit ten or eleven minims of the spinal fluid to escape into this test tube (as I have not unfortunately a graded device for the fluid to drip into), and attach the syringe to the needle by a gentle wrench, and now slowly inject ten minims of the solution (one-sixth grain), withdraw needle and cover wound with sterilized collodion. The patient has conversed during the procedure and has experienced no pain at all. In fact he states to you that he was waiting and expecting me to begin.

The patient may now be placed in position for the application of the tourniquet.

While waiting to observe the approach of anæsthesia, I have discovered from examination of my hypodermic syringe that I used only about one-eighth grain—in my caution I injected less than I expected. We have now waited six minutes and there is some little pain from extending the knee and piercing the skin. At eight minutes the tourniquet is applied at the juncture of middle and upper third of thigh and you hear the patient complain a little from the pressure. Fifteen minutes has now passed and the patient has no pain from pulling on his inflamed knee, and he no longer feels the pressure of the constricting Esmarch bandage; and at eighteen minutes I begin my skin incision, and as I make the circular skin incision just above the knee; dissect the skin back; cut through muscles; make my periosteal flaps; saw through bone with a wire and ligate the femoral artery, the patient continues to converse and experiences no pain whatever. I close the muscles and periosteum over bone with Kangaroo tendon sutures and the skin with continuous suture of fine silk—having put in a few interrupted worm gut sutures and rubber tube drainage. After dressing the stump, I find I have been a slow operator and twenty minutes have elapsed.

The patient expresses himself delighted and sits up to support the stump himself until it can be photographed.* The patient will now return to the ward.

I desire to say that, from a study of all reported cases I have been able to make, I must conclude that cocainization of the spinal cord is yet in the experimental stage and is a method that should be employed only by careful and well trained hands, and should not be generally used in private practice. Of course the cocainization is not without dangers, and patients will get better protection and care in hospital treatment.

Our patient has returned to the ward in good condition, but we have yet to see what effect may be produced upon the temperature and the pulse.

Dr. Stone, in his recent admirable article published in The American Journal of Obstetrics and Diseases of Women and Children, is very conservative and it will not be out of place to give you further extracts, from his cautious pen. He gives, in that article, many prac-

*This patient went to the ward in good condition. Pulse 90 and temperature $98\frac{1}{2}$ degrees. He did not have any of the bad effects generally reported, except that his temperature gradually went up to 101 degrees, and his pulse 124. In twelve hours the pulse had returned to 90 and temperature to normal. No treatment by medicine was given and now—five days—after operation the wound shows union by first intention is assured

tical lessons in its application to obstetrics, but I have not time to relate them. He tells us that "the possibilities of introduction of pathogenic organisms with the needle are many. Dr. Corning has done this operation in his office very often without any bad results, and it is absolutely impossible for one to have perfect asepsis under such conditions and surroundings. Then, again, there is the personal idiosyncrasy for cocaine that one has to look out for. Already Tuffier has had two cases of sudden death from cocaine poisoning. However, this might be avoided by repeated small doses in large amounts of solution.

"Still another objection which might be put forward is the probability of ulterior effect, which might come on weeks or months after, due to injury of some kind to the nerve trunks or cord.

"If we should accidentally pierce one of the larger nerve trunks within the spinal canal, I do not think any serious or lasting harm would accrue. I can recall several such cases in my own personal experience, where this accident evidently occurred and no serious results followed—indeed, no appreciable results at all followed. Hence I think this cannot be counted as an objection to the operation.

"Letters received from my earlier cases have been most satisfactory, though as yet it has been but little over three months since I did my first injection. In only one instance did I hear of symptoms that caused me any anxiety. This I found, on visiting the patient, to be an ailment which had bothered her for some time previous to her confinement—namely, a pain in her neck which radiated into the eyeballs.

"In view of the many injections that have been done by surgeons throughout the medical world, and the failure of any one to report bad results, I think it safe to say that we can cast aside the possibility of ulterior effects. However, in one case, where the needle was put into the lower dorsal region because the patient had forward curvature and almost complete ankylosis of the lumbar vertebræ, I have seen sensory disturbances which have now lasted two and a half months and appear to be permanent. This was a case of a woman upon whom a hysterectomy was successfully performed with medullary narcosis. The anæsthesia was complete, but ever since the operation she has had an area of skin anæsthesia upon her right leg corresponding to the distribution of the anterior branch of the fifth lumbar nerve."

WHEN SHOULD PATIENTS BE ADVISED TO EAT EVERYTHING?

A paper on this subject by Boardman Reed (*Internat. Med. Magazine*, August, 1900), concludes as follows: We should never advise our patients to "eat everything" until we have thoroughly cured their diseased digestive organs and freed them from the lithemic condition; and powerful as are our modern weapons against these, we cannot often succeed in accomplishing such a radical cure until the patients have reformed their unhygienic habits, not only in eating and drinking, but also in both their work and play. They must learn self-denial, and at least the rudiments of the immutable laws of health, and, having learned, obey them. They must take into their stomachs, in approximately right proportions, the things that will nourish and strengthen them, and little or none of those whose chief effect is to derange or irritate the functions or tissues the body. In many cases, besides, they must give up sedentary employments or pleasures, and take regularly every day an adequate amount of out-door exercise. In short, oxidation must be made to bear its proper ratio to alimentation.

Nor should we advise even the well persons in the families under our charge to "eat everything" without some regard to their idiosyncrasies and tendencies, as well as a reasonable amount of care that they do not follow a harmful acquired taste for too much of the rich and complicated viands, or such undue proportion of nitrogenous foods as would make patients of them a few years later by setting up gradually insidious forms of chronic disease which would inevitably result in gout or rheumatism, or in other more serious and fatal organic affections.—*Med. Times*.

EROSIONS OF NIPPLES.

Treatment.—The slight erosion on the upper surface of the nipple so common in primiparous nursing women heals readily when touched with a strong solution of nitrate of silver, while the fissures and cracks at the base of the nipple improve at once when collodion or compound tincture of benzoin is applied, and a glass nipple-shield used for a day or so, or, in the bad cases, suspension of nursing on the afflicted breast for twenty-four hours. The woman should be instructed to notify the physician as soon as one of these lesions of the nipples appears, so that active treatment may begin at once. She should be warned to let her physician know as soon as a localized tenderness in the breast appears. When pus has once reached the glandular tissue, incision and drainage are necessary.—Harrison D. Jenks (*Physician and Surgeon*, Nov., 1900).

Selected Articles.

A PLEA FOR BETTER OBSTETRICAL WORK.

By LILLIAN G. TOWESLEE, M. D.

Gynecologist to the Cleveland General Hospital Dispensary; Instructor of Gynecology, Cleveland College of Physicians and Surgeons.

If pregnant women had better care before delivery, sequellae would be rare and many a life saved. How often we hear of some woman's sudden death from eclampsia which might have been avoided had a urinalysis been made from time to time during pregnancy. I have made it an essential feature in my obstetrical work to examine the urine of pregnant women once a month and in suspicious cases more frequently, as well as a microscopical examination when needed. These examinations take time from the busy hours of a physician but anyone who undertakes obstetrical work should not guess when it is their plain duty to know. One's luck is not to be trusted when a life is at stake. Many a life has been sacrificed by carelessness and even recklessness.

Mrs. M., age 21, primipara, consulted me at the end of the seventh month of pregnancy for her "bloated condition," as she termed it, of five days' duration. She seemed twice her normal size. (I had known her for several years.) Her urine showed 4 per cent. of albumin on examination. She returned in forty-eight hours with a morning specimen which showed the same amount of albumin found in the first examination. She complained of pain in the region of both kidneys with scanty urine. I sent her home and to bed, ordered diuretics, diaphoretics and cathartics, hot packs and milk diet. In ten days the albumin was reduced to 2 per cent. for one day only, after which it rose to 4 percent. and remained there until after delivery, which occurred in eight and one-half months. During the time of my attendance, the patient was edematous—legs, thighs, hands and abdomen pitted on pressure. When the much-dreaded labor began the pains were about five minutes apart and kept up for fifteen hours—and the patient did not micturate during this time. She was given chloral hydrate in as large doses as she could endure—later on chloroform. The progress of the labor was very slow, taking hours for the head to engage. As the head advanced so that forceps could be applied with safety, a five-pound girl was delivered. The baby was cyanosed but soon revived after artificial respiration. The perineum being lacerated it was repaired. The albumin entirely disappeared within the next ten days. Four weeks after confinement the urine was re-examined and

no albumin found; the patient was dismissed in good condition.

In this case there was no kidney disease previously existing but a true case of albuminuric nephritis of pregnancy, which probably developed within the last six or eight weeks of pregnancy, as a urinalysis made a short time before the appearance of the edematous condition revealed no albumin or other evidence of nephritis.

In such a case of pronounced albuminuria the question might arise as to why the gestation was not terminated at once. It seemed to me that by suitable diet and treatment my patient might improve and go nearly to full term, thus giving the child a much better chance of living without endangering the mother. If there had been pre-existing kidney disease it would probably have been wise to produce premature labor, but as I felt sure that it was a true nephritis gravidarium, decided to keep the patient under close observation and to wait. Although we had all the elements in the case which might result in eclampsia, yet the course adopted after due and anxious consideration proved the wisdom of the conservative course followed.

Too much importance should not be attached to small quantities of albumin in the urine of pregnant women for it is a recognized fact that 15 per cent. of them have more or less albumin in the urine. In addition to pregnancy, fibroid and ovarian tumors may cause albuminuria which disappears usually after their removal. The causes of albuminuria in these states where there was no pre-existing kidney affection have been accounted for by various writers on the following hypothesis:

- a. Pressure on the renal veins and other vessels.
- b. Pressure in the ureters.
- c. Increased arterial tension.
- d. Increased work thrown on the kidneys, as they have to excrete the waste products from the fetus, a large uterus and the mother.
- e. Reflex nervous disturbances.
- f. Germ-infection.

Two or more of these conditions may exist at one time to cause a large quantity of albumin within pre-existing kidney lesion.

It is the duty of every physician to attend to the preparation of the breasts for the expected child so that the mother will not have the excuse of sore nipples to keep her from nursing her baby. The preparation of the nipples should precede the birth of the child several weeks. In primipara it is well to begin hardening the nipple as early as the fourth month. This can be done by using astringents and gentle massage. If the nipple is retracted it should be drawn out gently. The patient should be warned to keep the nipple clean so that the secretion in the crypts and crevices may not harden and cause fissures. During

lactation the nipple should be washed with a safe antiseptic such as boric acid solution, and if the baby's mouth is also washed with an antiseptic solution, disagreeable consequences such as sore nipples and mastitis will be prevented.

The laity have an impression that any "old woman" can take charge of a confinement. This may be true in some cases, provided everything is normal, but the trained obstetrician is needed in most cases.

Lacerations of the perineum should be repaired immediately after delivery—unless there has been a post partum hemorrhage, or some other complication as grave. In primipara it is especially important that a damaged perineum be repaired at once, as it can be done easier at that time and the patient thereby saved from years of suffering. In repairing the perineum the sulci must not be overlooked, as any tear extending into the vagina must be sewed up before bringing together the outside parts. The lochia flowing over the stitches may retard union, but good union can be secured in most cases. If the operation is done antiseptically and the necessary care taken of the wound by the nurse (without a good nurse it is impossible to obtain good results) there is little danger of infection. I have had stitches infected in but one case in two hundred, and that was due to a typhoid infection. The patient was infected before delivery and the night after she gave birth to her baby, her bowels moved involuntarily and when discovered by the nurse the stitches were covered with feces. Although there was no infection above the suture line, the patient developed a temperature ranging from 101 to 104 for ten days. The "diazo" and Widal tests were positive, and with clinical symptoms demonstrated a typhoidal infection. The patient had a temperature during labor—she was so hot and feverish I disliked to apply forceps under chloroform, which was necessary, baby being large—10 1-2 pounds—mother exhausted.

"Typhoid fever is a slow process and never develops post partum without some evidence of its existence before labor. Sepsis resembles typhoid in many of its phases, and one might be misled. Without the spots, the tongue, Widal and 'diazo' reactions in addition to the fever, one would not be justified in making a diagnosis of typhoid in the puerperium."* In my case the patient had the typhoid tongue, the delirium, the "diazo," and the Widal and absence of leucocytosis. The patient's convalescence was slow.

The care women have after labor is, in many cases negative. There would be fewer cases of sub-involution with its train of symptoms if patients were kept quiet longer and taught that they were not to go to work as soon as they were out of bed, which is true with the most of women. Women of this age of existence cannot do as the old squaw

—have her baby and move on the next day. The higher civilization mounts, the more care is required. Do not keep a woman on her back too long, but let her lie on either side and thus many a retro-displacement will be prevented.—Bulletin, Cleveland General Hospital.

THE ROLE OF PETROLEUM IN THERAPEUTICS AND WHY IT IS PRESCRIBED.

Synopsis of Research Experiments made by G. Burdidge White, M. D.,
Diplomate State Medicine, University Dublin, F. R. C. S. I. etc.

Petroleum has of late become a most popular remedy; it is a comparatively new drug and not much information has been forthcoming respecting its therapeutic action. That which has been available has been somewhat confused and misleading. I may be able to throw some light on the subject by the brief remarks which follow:

The name, Oil of Petroleum, may convey the idea to the average medical reader that it is a fluid fat, having all the characteristics of a fat and behaving like one when swallowed and subjected to digestive action, and the most likely fat for it to be confounded with is the well known cod liver oil. This error may be accentuated by the fact that both substances are to be found in the form of Emulsion, about the same strength, and it is frequently stated that petroleum is a substitute for cod liver oil. If we examine the chemical and physical characters of these two substances, we ought not to again confound them. Cod liver oil is a true fat, consisting chiefly of olein, containing an active principle termed mercuriol and traces of I. Br. with Phosphates, etc. It behaves like a fat when digested, being emulsified, partly saponified, absorbed to be assimilated, and enters into the body metabolism, the great objection to its use being that while undergoing digestion the fatty acids are set free and cause the usual eructations, also its smell produces nausea. It is not a good vehicle as it soon becomes rancid. Furthermore, it offers concentrated nourishment for bacteria and therefore serves as a culture medium for the growth and multiplication of micro organisms, thus producing gastric and intestinal fermentation and auto-intoxication from absorption of toxins from the intestinal tract. Petroleum, the absolutely pure residue after complete purification of the crude substance, is a fluid hydrocarbon, not a fat or oil, the formula $C_{12}H_{26}$ representing a type of the series. It is devoid of chemical substances or salts in solution, cannot be digested nor assimilated, nor can it enter the body metabolism. It is unchangeable, organisms will not grow in it, and it does not become rancid. Therein lies its superiority as a vehicle over perhaps any other substance used for this purpose. That it is capable of producing great

clinical benefit cannot be denied. I now proceed to point out how it acts.

Besides acting as an ideal vehicle, Petroleum rivals belladonna in its numerous applications and therapeutic actions. It has been largely recorded of it that it increases weight, relieves dyspepsia, flatulence and constipation without aperients, diminishes cough, catarrh of the mucous membranes of the respiratory, intestinal and genito-urinary tracts.

In some experiments I made with Angier's Petroleum Emulsion upon digestion and absorption I satisfied myself of the following effects: I found that certain proportions of the Emulsion rendered peptones and fats (chyle) more miscible and diffusible and that a quicker and more complete absorption of the weight-giving nutrients took place in a given time under its influence. This effect was enhanced by solution of thick impure mucous covering the wall of the bowel, while increased peristaltic action favored digestion, and also presented constantly new and fresh portions of the finished products of digestion and absorption, while as additional action it was proved that the Emulsion is a perfect intestinal antiseptic inasmuch as it completely inhibited the growth and action of putrefactive bacteria such as inhabit the alimentary canal. Peptic and tryptic digestion was hastened and rendered more complete.

The well known clinical fact that Angier's Petroleum Emulsion favors natural bowel movements even in cases of chronic constipation was proven in my experiments to be due to the fact that Petroleum acts as a well distributed lubricant to the intestinal mucous membranes and induces natural, mild peristalsis which persists for several hours after the death of the animal.

To put the matter shortly, petroleum properly purified and prepared is a substance that renders the digestion of all classes of food stuffs—albuminoids, carbohydrates and fats—more thorough than occurs without petroleum, and favors the complete absorption of the finished products of digestion into the system. It thus acts as a true nutrient, providing the tissues with exactly the character of material required to repair waste, and by thus maintaining normal nutrition it antagonizes the progress of morbid processes such as tuberculosis, scrofula, inanition, marasmus, etc. Furthermore, Angier's Petroleum Emulsion was found by actual experiments to exert a more promptly beneficial influence upon inflammatory conditions of the respiratory tract than any combinations of expectorants and cough sedatives. It exerts this influence without inducing gastric disturbances of any kind; indeed it was noted that these disturbances when present as a complication of the disease were invariably overcome and the processes of digestion reinforced to a most pronounced extent. In pulmonary tuberculosis,

and in both acute and chronic bronchitis, not only was the cough rendered less severe and less frequent, but expectoration of retained secretions was easy and free from effort on the part of the patient. The symptoms of catarrh of the respiratory organs promptly disappeared and proved that Angier's Petroleum Emulsion has a selective action upon the larynx bronchi and pulmonary alveoli. In all cases the disappearance of the local symptoms was accomplished by improvement in nutrition, manifested by increase of appetite, ability to digest and assimilate food and a rapid and progressive increase in body weight.

REPORT OF A CASE OF TYPHOID FEVER WITH COMPLICATIONS.

By J. T. ABSTON, M. D.,

HICKORY FLAT, MISS.

Willie S., aged 12 years, after the usual prodromic symptoms, took her bed December 28, 1898, with typhoid fever, this being the fifth case of the family of six children. She was rather small for her age, previous health good. The fever ran a violent and obstinate course, accompanied with most all the symptoms that characterize this type of fever, rose rash, red tongue, tympanitis, diarrhoea and repeated hemorrhages. After first few days her temperature ran from 103 to 105½ degrees almost daily until the sixth week, terminating rather suddenly leaving her in an extremely emaciated and debilitated condition, with very weak and irregular heart action, which was overcome by the use of strychnia, digitalis and stimulants. Just one week before the fever terminated there was a leucorrhœal discharge from vagina resembling, both in character and odor, the lochial discharge after parturition. There was tenderness over the region of the uterus, but to no marked degree. When convalescence was well established I dismissed her, thinking the discharge would subside as she recuperated; but not so. In a few days her father reported her not much improved, with no recurrence of fever, discharge continuing. It was clear to my mind that this drain was impeding convalescence. I continued the tonics that I had instituted in the beginning of convalescence from fever, and sent her Aletris cordial to be given three times daily. In a few days the flow was arrested and her progress was entirely satisfactory, appetite good, bowels in normal condition.

Ten days later I was summoned to go at night; they thought she would die with cramp colic, accompanied with vomiting. On arrival she was relieved and resting quietly. I accused them of imprudence in her diet, but they claimed they had not violated my instructions on that line. Two days later I was sent for again, but being absent, my neighbor, Dr. Holcombe, answered the call, and found her in like

paroxysm, he remaining with her all night, paroxysms occurring at intervals, bowels acting sufficiently. I saw her again at 7 p. m. and thought her case entirely hopeless. She was vomiting genuine fecal matter, her bowels having moved sufficiently up to noon, paroxysms would occur at intervals, bowels would knot up apparently as hard as a rubber ball. I suspicioned an obstruction in the intestinal tract from reversed peristaltic action, and made frequent attempts to move bowels by enema without satisfactory results. She was unable to raise her head off the pillow, pulse indistinct. I used strychnia and digitalis hyperdermically, quinine and milk per rectum, and gave her one grain of calomel every two hours until four grains were taken, and to my surprise she retained the first dose and there was no repetition of cramp or vomiting. Bowels were evacuated next day by enema, and she started slowly but surely on the road to recovery again.

I omit my treatment in this case of fever, as the profession is familiar with the very few drugs required in its treatment. In the vomiting I used oxalate of cerium, bismuth sub. nitrate, creosote, ingluvin, hot fomentations, poultices, counter irritation by blistering, strychnia and morphine hyperdermically. Patient having never menstruated before nor since, what could have caused this leucorrhœa? Was it of reflex character, from irritated and ulcerated condition of the intestinal tract? Or is it possible that typhoid bacilli could have infected the vagina, thus causing the flow, though hygienic measures and cleanliness were strictly guarded by the hand of the anxious and devoted mother.

What per cent. of reversed peristalsis recover? I saw a case in consultation, during my first year's practice, resulting from acute gastro-enteritis, terminating fatally; patient vomiting castor oil given by enema.—News and Practitioner.

COMPLICATED ANÆMIA.

By T. J. BIGGS, M. D.,

STAMFORD, CONN.

Ruth K., age 14, American; admitted November 14. Diagnosis: Essential anæmia.

The patient had been sent to me by Dr. B., who said that, in spite of all treatment employed, his little patient had grown steadily worse, and the parents were wellnigh discouraged. Her condition was associated with menstrual disorders; a year previous she said her disposition seemed to change. She found she was becoming morose and despondent, at times hysterical, and suffered very much from melancholy. Her menstrual order was of the menorrhagic form, her complexion was pallid, waxy, skin puffy without œdema; she was easily fatigued

upon the least exertion; the heart was irritable; there was shortness of breath, pulse full, but soft, and at times pulsations in the peripheral veins. There was a disgust for food, imperfect digestion and occasional attacks of gastralgia. In the right apex there was a suspicious dullness, indicating a possible incipient phthisis. Examination of the blood showed a relative decrease in quality and quantity of the hæmaglobin, resulting in the blood being paler than normal. The red corpuscles were lighter in color and showed less tendency to form rouleaux, their character was changed, not being of uniform size, some normal, others small (microcytes), others unusually large (macrocytes), others irregularly shaped (poikilocytes). The number of corpuscles to a cubic millimeter was about 2,500,500. The white corpuscles were considerably increased in number. A few granular bodies were present, indicating degeneration of the white corpuscles.

The patient was put to bed, secretions regulated, and a half teaspoonful of bovine was ordered every hour in peptonized milk.

On November 18th, the bovine was increased to a tablespoonful every two hours.

November 30th, the bovine was increased to a wineglassful every two hours, given in peptonized milk, alternating with old port wine. The patient at this time showed quite some improvement, felt stronger, slept better, digestion seemed excellent, bowels regular, and she slept throughout the night quietly.

December 10th, microscopic examination of the blood showed increased quantity and quality of hæmaglobin, and red blood cells 3,000,000 to the cubic millimeter.

December 18th, the patient had gained seven pounds in weight, color good, puffiness of the skin disappeared, and she was taking daily exercise in the open air without suffering fatigue.

December 24th, microscopic examination of the blood showed hæmaglobin almost normal, the red blood cells about 4,500,000 to the cubic millimeter; general condition splendid.

On December 26th patient was discharged cured.

The complete, thorough and rapid cure in this case was undoubtedly due to the blood treatment, for all through her course of treatment, outside of cathartics and some mild heart stimulant, she took absolutely nothing but bovine. Bovine acts in anæmia in all its forms by first stimulating the blood cells to a healthy proliferation, and secondly, by properly and thoroughly supplying perfect nutrition, carries them on to a full and healthy maturity. Iron in all its forms, while at first undoubtedly beneficial, can only go half way, for it simply stimulates the proliferation of the blood cells and supplies only partial nutrition, the result being that in the majority of cases where it is employed alone, many of the newly born cells, for lack of proper nutrition, atrophy or become granular bodies.

Editorial.

JNO. C. LeGRAND, M. D.,..... *Editor and Prop.*

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The Discovery of Anaesthesia.

In his *History of Medicine in the United States*, published by J. B. Lippincott & Co., which is just out, Francis Randolph Packard, M. D., devotes a chapter to the discovery of anæsthesia, and accords to Dr. Long, of Georgia, the credit of the discovery of the ether.

The discovery of anæsthesia was attended by the bitterest and most acrimonious discussion as to who was the real discoverer. In the following account I have set aside very briefly the claims of Dr. Charles T. Jackson, Dr. Horace Wells, and Dr. Marcy. In my opinion, the credit of first using ether as an anæsthetic is due to Crawford W. Long, and the credit of demonstrating its value and use to the medical profession and the world must be ascribed to W. T. G. Morton. Dr. Jackson was consulted by Morton on the subject of procuring some substance to annul pain during surgical operation, and he advised them to try

sulphuric ether, saying that it would produce unconsciousness when inhaled. Jackson went no further, however. He never tried the experiment of using ether, and the fact he stated had been known to the scientific world for years.

Horace Wells was a dentist of Hartford, Conn. In 1844 he heard a chemist lecture on the subject of nitrous oxide, and saw a young man who had inhaled some of it run against furniture and bruise himself without experiencing any pain. The next day he gave himself the gas and allowed a Dr. Riggs to pull one of his teeth. He felt no pain, and on becoming conscious made his famous remark, "A new era in tooth-pulling!" He at once began the manufacture and use of nitrous oxide. Dr. Marcy suggested that ether would make an available substitute, producing the same effect, without requiring as much apparatus as the gas, but Wells thought, after a superficial investigation, that ether would not suffice.

In the same year, 1844, two years after Dr. Long had operated on patients under the influence of ether, Dr. Marcy claimed he performed an operation on a patient while unconscious from the drug. Even if he had done so, Long antedated him.

Jackson, Wells and Marcy, however, all pushed their claims for the discovery of anæsthesia. Jackson became insane in 1873, and died in an asylum in 1880. Wells died in 1848, while the controversy was at its height. Marcy's claims were very generally disregarded.

Let us now proceed to the consideration of the men to whom is really due the honor of so great a step towards the annihilation of suffering.

Dr. Crawford W. Long was the first man to use ether as an agent to relieve the pain of surgical operations. As the subsequent narrative shows, he was a modest country practitioner, far from the centers of medical learning, and destitute of means to properly exploit his discovery. He does not seem to have actually realized what a vast benefit the discovery of anæsthesia would prove. Probably he did so little surgery that the question of the relief of pain was not presented so forcibly to his mind as to that of others; yet he must have had a large obstetric practice, although it never seems to have occurred to him to use it in those cases at all.

Crawford W. Long was born in Danielsville, Ga., on November 1, 1815. His father seems to have been a man of considerable prominence in the community. Long received the degree of M. A. from Franklin College at the age of nineteen, and the degree of M. D. from the University of Pennsylvania in 1839. He spent one year after this in a New York hospital. In 1841 he settled down to practice, at Jefferson, Jackson county, Georgia, a small town, far from any railroad. It appears that some itinerant lecturers on chemistry passed through the town at times, and an almost invariable part of their entertainment

consisted in making some of the audience drunk with nitrous oxide. Some young men who had heard what pleasure could be derived from this inhalation, asked Long to try it on them. He said he had no nitrous oxide, but that ether would produce the same effect. They inhaled it and found it such fun that ether inhalations became a popular source of amusement all through that section of the country. During January, 1842, many such frolics were held in Long's office, and sometimes, when staggering about, those who were drunk had injured themselves without experiencing the least pain. Long remarked this, and determined to use it as soon as practicable in a surgical operation. On March 30, 1842, such an opportunity presented itself, and he operated on a man named James Venables, removing a small cystic tumor of the jaw.

Communicated.

Editor Alabama Medical Journal: Having the best interests of the medical profession at heart and feeling particularly interested in our State and county organizations, I believe the time propitious for the discussion of the following resolutions by the society. I hope to offer them at our next meeting, and that the doctors may familiarize themselves somewhat with what is coming, I would be glad to have you publish this in your current issue, that any one feeling sufficient interest may be prepared to then discuss the subject.

Whereas, the Jefferson County Medical Society, composed of members who have the best interests of the profession, and the welfare of the city, county and State at heart, recognize that a permanent home of the State Medical Association is necessary to the growth and development of the profession in the State, and that a suitable repository may be formed for its Archives, Library, Museum and such articles of interest as may be collected and acquired by the said association, and that it may be enabled thereby the better to advance the cause of medical knowledge and the standing of its members elevated in their various communities, which can only be accomplished by study, research, and investigation along experimental lines; therefore, be it

Resolved, That the Jefferson County Medical Society declare in favor of the above sentiment, and that we believe the city of Birmingham, as the commercial, railroad and industrial center, shall be the place for the permanent home of the State Medical Association.

Be it further resolved, That this society offer to donate a suitable lot, or a reasonable equivalent in cash, toward the accomplishment of the expressions of these resolutions.

Resolved further, That this society declares in favor of a higher educational standard in our literary schools and colleges.

Resolved further, We believe that all applicants for admission to our medical colleges should have a diploma or a first grade teacher's certificate, showing applicant to be of fair educational acquirement and capable of comprehending thoroughly a knowledge of medicine and surgery, that he may go forth with diploma, well equipped to serve the public and reflect credit upon the profession.

Resolved further, That the delegates from our society present resolutions embodying these views to the State Medical Association.

Without saying anything in support of the above resolutions, I will state that this is an age of education, organization, concentration and unity of effort, from which stupendous tasks may be undertaken, large enterprises handled, great feats accomplished, and wonderful results obtained. While these suggestions may appear extravagant, they are modest, when compared with the possibilities of our country, now and prospectively. The advantages of co-operation are recognized in every vocation, and the time will come, if not now present, when the requirements of the doctor will demand the formation of a national organization, for the purpose of erecting and maintaining at some center in our country a great university of learning, and hospitals more thoroughly equipped and of greater extent than any institution now known, where every facility can be applied to perfecting the doctor and make of him a most thoroughly educated and well-trained man. We believe the science of medicine should stand pre-eminent above any other branch of learning, and that the members of the profession should be profound scholars, well balanced and of good judgment. He should write after his name, M. D., B. P.—Doctor of Medicine, Biologist and Philosopher—which would be of far higher significance than LL. D. An undertaking of this character, having the best interest of humanity and our nation's health and welfare as a purpose, would be of greater benefit to the people of our country, and posterity, than any other undertaking now seeking government aid. An educative campaign instituted for the study of the subject would result in demonstrating its feasibility and great importance; proper committees could be formed, plans perfected and inauguration accomplished.

What is there in all the world more important to mankind than knowledge of how to live, to get the longest term, and most good to concurrent and succeeding generations? What factor or element of humanity should, from training and precept, lead in such movement, and be accorded position at the head of human affairs? Whom but the physician? He should stand, without a peer, at the front, and lead the world in broad intelligence, liberal education and the highest moral attainment.

R. C. Bankston,

Miscellaneous Notes.

Dr. W. H. Wilder is spending a few weeks in New York.

Dr. H. T. Heflin, (formerly of Bessemer, has located in Birmingham.

Dr. W. H. Sanders, State Health Officer, was in the city on the 11th instant.

WE HAVE A NEW YALE SURGEON'S CHAIR FOR SALE AT A BARGAIN.

In Dr. Ledbetter's able article appears a typographic error: antitoxin has no final "e."

We regret to learn that our friend, Dr. W. A. Smith, of Anniston, is seriously sick.

The Medical College (of Birmingham) commencement will be at the Jefferson, April 1st, 1901.

Doctor, if you want a first-class Yale Surgical Chair, write to the Alabama Medical Journal.

The American Academy of Medicine will meet in the city of St. Paul, Minn., June 1-3, 1901.

The doctors of Alabama recognized Cullman county as being the "hub," from which the quacks must go.

All honor to the gentleman who represented Cullman county in the recent session of the Legislature of Alabama.

The American Medical Editors' Association will hold its next meeting in St. Paul, Minn., June 3d, 1901.

Dr. W. H. Blake, former medical inspector of convicts of Alabama, is speaking of locating in the city of Opelika, Ala.

Dr. Shirley Bragg, of Montgomery, has been appointed medical inspector of convicts of Alabama by the Governor.

Dr. A. S. Warwick has located in the city, with office at 2012 Third avenue. He will limit his practice to diseases of eye, ear, nose and throat.

We are sending a statement to all subscribers who are due anything on subscription, and hope every one will remit promptly and greatly oblige the business part of the Journal.

The American Medical Association will meet this year in the city of St. Paul, Minn., June 4-7. The doctors of St. Paul are making great preparations for the entertainment of the association.

A number of Birmingham doctors are thinking of dispensing with their horses and buying an automobile. Dr. J. D. S. Davis has purchased one of these horseless vehicles. The Birmingham doctors are aggressive.

When a red-headed, red-eyed monster can go before the Legislature and defeat an important bill, which was proposed by the best element of the medical profession in the interest of the people, it is time for retrospection, and ask where we are "at."

We do not say that we must, BUT INSIST THAT WE SHOULD, AS A PROFESSION, STAND SHOULDER TO SHOULDER IN MAINTAINING every interest which has been proposed by the State Medical Association in the interest of the people of Alabama.

The State Medical Association will meet in the city of Selma the 16th of next month. Every doctor in the State who can possibly do so should attend this meeting. A large number of good papers have been promised, and the meeting will be an interesting and profitable one.

Prof. Joseph McFarland, M. D., of Philadelphia, a recognized writer, teacher and authority on bacteriology, has removed to Detroit to engage in scientific research in the biological laboratories of Messrs. Parke, Davis & Co. Prof. McFarland will thus become an associate of Drs. Charles T. McClintock and E. M. Houghton in the important field of biology and bacteriology.

One of the pleasant occasions during the month was the dinner given by Dr. George H. Stubbs, at his beautiful home on the South Highlands, on the evening of March 8th. Those present were Dr. T. L. Robertson, Dr. Thomas D. Parke, Dr. Wyatt Heflin, Dr. H. M. Collins, Dr. Cun-

ningham Wilson, Dr. W. M. Jordan, Dr. E. M. Robinson, Dr. Hardee Johnston and Dr. J. C. LeGrand.

An eastern editor says that a man in New York got himself into trouble by marrying two wives. A western editor replies by assuring his contemporary that a good many men in that section had done the same thing by marrying one. A northern editor retorts that quite a number of his acquaintances found trouble enough by promising to marry, without going any further. A southern editor says a friend of his was bothered enough when simply found in company with another man's wife.—Ex.

The third Pan-American Medical Congress was held at Havana, Feb. 4-8, 1901, under the presidency of Dr. Juan Santos Fernandez, of Havana. Governor-General Wood welcomed the congress in appropriate terms at the Tacon Theater, February 4th, in the presence of a brilliant audience. About 400 members were in attendance at the sessions, 100 of whom were from the United States. The congress seems to have been a scientific success. The next meeting will be held at Buenos Aires in 1903.—Ex.

The Medical Society of the State of Tennessee will meet in Nashville, April 9, 10 and 11 next. The Nashville meetings of this society are usually the best attended and most interesting meetings that it holds, and the prospects for the approaching meeting are usually good. Under the able administration of Dr. W. D. Haggard, in the office of secretary, with the former efficient treasurer of the society, Dr. D. E. Nelson, of Chattanooga, in the president's chair, the sessions of the society should every one of them be replete with good work. Titles for the preliminary program should be sent to Dr. W. D. Haggard, Nashville, Tenn., at once.—Memphis Med. Magazine.

The Memphis Hospital Medical College has adopted plans for a new college building, on which work will begin early in April. The structure is to cost \$100,000, and it is to be four stories in height. It will be situated on the north side of Union avenue at the junction of Marshall avenue, and will front 165 feet, running through to Monroe street. This building will be complete in every detail, with clinical amphitheater, lecture room to seat 1,000 students, microscopic and chemical laboratories, dissecting room, dispensary, and every other requirement necessary to facilitate the impartation of instruction to students of medicine.

Birmingham, soon to be the biggest town south of the Ohio river, is

building hotels and hospitals to meet the requirements of its new growth. The faculty of the Birmingham College are arranging plans for modern college buildings to cost not less than \$200,000.

It is almost always a layman who carries a matter of medical doctrine to the extreme. The Paris correspondent of the Lancet speaks of an amusing instance in that journal for July 8th. A Parisian traveling on a railway train refused to give his ticket into the hands of the railway company's official. When arraigned for having thus broken the law, he pleaded that he had been unwilling to put into his pocket a ticket which would be contaminated with microbes from the inspector's hands, they were so dirty! Nevertheless he was fined a franc.—N. Y. Med. Journal.

POSSIBILITIES OF LIQUID AIR TO THE PHYSICIAN.

A. Campbell White, New York, says that pure cultures of anthrax, typhoid and diphtheria bacilli, when placed in liquid air, in sealed

MAKE A CROSS MARK

To remind you
There is something
You have neglected
For the last ten years.

You should attend to it.
Concerning your home and
family.
A most important duty.
Don't dream over it longer.

A PIANO

Is not a luxury. Every prominent educational institution in the world considers music perfectly essential to a young lady's cultivation and refinement. It is a better ornament than fine clothes and lasts longer. Don't cost any more either.

AN ORGAN.

There is no cause for a man who will not buy his family a musical instrument. A good piano may be bought for one-fourth of what a toneless little spinet used to cost. An organ is as easy to buy as a one horse farm wagon.

Hundreds of instruments sold in your own State.
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Write for FREE LITERATURE and read up on Pianos and Organs.

E. E. FORBES,

26 Dexter Avenue, Montgomery, Ala.

New catalogue of Violins, Mandolins, Guitars, etc., just out.
Sole agents for Phonograph Records that won't break.

tubes, or when exposed directly to it, are not destroyed, and further cultures may be made from them. Freezing the surface to produce anæsthesia for ten minutes causes a slight desquamation of the epithelium. Clinically, the use of liquid air in cases of paracentesis, paronychia, neuralgias and herpes zoster (applied over the spinal end of the nerve) has been very gratifying. It is the best local treatment for carbuncle, but one application being required to freeze the carbuncle, after which a dry absorbent dressing is to be applied. The treatment of lupus vulgaris, and also of the erythematous form, as well as chronic ulcers, is very gratifying. In the destruction of adenoids, polpi, nevi and other hypertrophies and epithelioma, liquid air is of great utility and is most efficient in relieving pain and destroying the bad odor of advanced carcinoma.—St. Louis Med. Review.

Dr. Rosser suggests that it would many times be in better taste, in discussing papers read at a medical society, to leave off the old stereotyped way of thanking the author for his most excellent paper, and go at once into the merits or demerits of the subject presented.

ALETRIS CORDIAL



RIO CHEMICAL CO.
St. Louis, Mo., U. S. A.

Aletris Cordial

Is an emmenagogue, not abortifacient. It cures congestion of the uterus and ovaries, and favors the occurrence of the menstrual discharge. It is also especially appropriate when the amenorrhea depends upon anemia. It regulates menstruation, and is useful in all the derangements of menstruation, namely, amenorrhea, dysmenorrhea and metrorrhagia, provided these disturbances be idiopathic. By curing menstrual disease, a common cause of sterility, it will also cure the sterility. It is also recommended in erosion of the cervix and vulvar eczema.

THE USE OF BROMIDES IN HYSTERIA, DELIRIUM, ETC.

By J. S. Murphy, M. D., Sullivan, Ind.

Considerable has been written on this subject which has all the respectability of ancient lineage. And like most other obscure things, has received no stint of authoritative attention.

The ætiology of hysteria has never been satisfactorily explained. For a long time it was thought to be in some way related to uterine disturbances. But while it is not denied that sexual disorders may have a bearing on the primal cause of the phenomena, still it is also claimed that the ailment attacks both sexes. We have progressed not further than this.

The treatment at best has been attended in most cases with disappointing results. We are confronted with a "loss of due balance between certain of the high functions of the brain, spinal cord and sympathetic system." The treatment obviously should be, then, to restore this balance. Rest is a very essential feature. By rest is meant RESTRAINT of overaction of certain of the spinal nerve centers. My experience has taught me that nothing gives better results than the combined bromides; and these should be of the very purest obtainable. For this reason I have availed my professional self of Peacock's, not only for their purity—freedom from bromates and carbonates so common to the commercial bromides—but on account of their ideal synergic effects and the fact that they are neutral in reaction, which permits of combining certain alkaloids in the solution without fear or danger of precipitation.

In various forms of neurosis I have found Peacock's Bromides invaluable as an all-round agency of alleviation and cure. They have never disappointed me. In obstinate cases of epilepsy, where the treatment is necessarily protracted, I find them particularly useful in that their administration is not followed by the too common symptoms of bromism. And I would specially urge their utility in instances of delirium following alcoholic excesses.

Anything that conserves the vital forces, that does not depress any organ, as for example, the cardiac center, anything that gives the rest of normal sleep when repair is greater than waste, anything that tends to restore the nervous equilibrium, soothing the exciting centers, whatever and wherever they may be, must benefit the entire organism when each separate organ, then, of course, will receive its needful quota of help. And since local treatment is out of the question, I cannot conceive of better procedure, or one more infallible to the successful management of hysterical cases.

SUGGESTIONS WITHOUT HYPNOTISM, AS A THERAPEUTIC AGENT.

"Suggestion without hypnosis, in my judgment, plays a very important role in the treatment of disease, and imports into our therapeutic discussions a very uncertain element," says Dr. Harold N. Moyer, in *Medicine*. "Medical literature is replete with observations in which the influence of the mind upon the body and the so-called vegetative functions is set forth in a way that does not admit of denial. The question whether this force can be harnessed, and so directed as to be of value in therapeutics, is one that is still unsettled. The more, however, that it is studied, the more its value becomes apparent, and he who mixes his drugs with a large percentage of suggestion will secure the greater success in their application.

" * * * * Hypnosis, on the contrary, has many objectionable features. It is by no means easily induced excepting in those individuals with very unstable nervous systems, and in these it is quite certain that the effects are harmful. It is exactly in this class of cases that suggestion, without hypnosis, can be more efficiently employed, so I believe there is little necessity for inducing a hypnotic state. I do not pretend to say that it should never be done, but I do not believe it should be undertaken in a routine way, and I believe that it should be practiced by medical men alone."—*Med. Times, N. Y.*

IDLE PHYSICIANS.

In commenting upon the fact that within two months after hostilities began over forty-five hundred physicians offered their services to the surgeon-general of the army, the editor of the *Times and Register* remarks: "Ambition and patriotism are all very well to explain this mad rush of an army of nearly five thousand doctors, but, if the facts were sifted, it would be found that in all, with few exceptions, the real incentive was nothing to do, no practice, and the ghastly specter of grim want. The writer is familiar with instances where medical candidates, failing to secure entry to the medical department, have gone forward as non-commissioned officers, hospital stewards, and even privates in the ranks."—*Med. Record.*

A STRING OF TROUBLES.

There is no one part of the body more afflicted with so many unnatural conditions as the female genital tract, and no one remedy with as wide a range of usefulness in these diseases as Micajah's Medicated Uterine Wafers. Bear this in mind when the next case presents itself. Success always attends the use of the original (Micajah's) Wafer. The same cannot be said of substitutes.

CONTAGION AMONG NURSES.

Cornet states that two-thirds of the members of the religious sisterhoods who work among the sick, die of tuberculosis. * * Rumpel reports 114 cases of disease with 10 deaths, among the 300 nurses employed in the Hamburg hospitals, and 43 deaths among the 2,349 nurses in the eighteen Red Cross hospitals in Germany; seven from typhus and sixteen from other infective diseases, during the last three years. The total number of cases of disease acquired professionally amounted to 640, including 56 cases of typhus, 53 of diphtheria, 15 of scarlet fever, 6 of measles, 30 of wound infection, and 118 of various forms of angina.—*Jour. Asso.*

MEDICAL ETIQUETTE IN CHINA.

Chinese doctors are said to be even more scrupulous than their white brother practitioners in regard to the nice points of professional etiquette. Indeed, if reports be true, this honorable custom it at times carried to very inconvenient lengths. The following amusing tale is related in an English journal, which, if not veracious, is at least ben trovato: A Chinese gentleman was struck by an arrow, which remained fast in his body. A surgeon was sent for, and broke off the protruding bit of the arrow, leaving the point imbedded. He refused to extract it, because the case was clearly one for a physician, the arrow being inside the body.—*Medical Record.*

A. O. Stimpson, M. D., C. M., Thompson, Pa., says: I have used and prescribed CELERINA as a nervous sedative, in a sufficient number of cases to test its medical virtues, and by experience I find that it is by far the most effective anodyne compound that is made. It is especially adapted to such cases that will not tolerate opiates, especially in neurasthenia and hysteric convulsions. I have also used it as a calmative in several cases of insomnia, brought on by over-indulgence in the use of alcoholic stimulants. I have often combined it with Peacock's Bromides very effectually. Miss A. C., a young lady inheriting an extremely nervous temperament from her mother, was treated by me three months ago for amenorrhea and chlorosis. Preparations of iron were prescribed for her with decided benefit, as a constitutional treatment, but she could get no rest at night, only when completely exhausted. Opiates of various kinds proved more of an excitant remedy than calmative. By the frequent and repeated use of bromides of potash, soda and ammonia, she would obtain rest when her stomach would tolerate the remedies, but CELERINA proved to be the sine qua non in her case; the second dose scarcely ever failing to procure a protracted and refreshing sleep. Case 2. Mr. F. L., a professional

house painter, occasionally afflicted with colica pictorum, immediately relieved of pain and trembling by repeated doses of CELERINA given in milk. Case 3. Mrs. J. G., an aged lady, suffering from hemiplegia, attended with annoying formication in palsied limbs, was relieved of these disagreeable symptoms and of insomnia by the use of CELERINA. Opiates of any kind failed to have any beneficial effect, and the bromides and preparations of valerian disagreed with her stomach. Case 4. Mr. S. S., an habitual toper, had had no sleep for three nights in succession, where the stomach was in such a condition that it refused to tolerate alcoholic stimulants in any shape, was speedily relieved by the use of CELERINA. Case 5. A. C., a young child, two years old, suffering from hydrocephalus, was greatly benefited by the use of CELERINA as a nervine sedative, and is in a fair way to gain unlooked-for health.

WORTHY OF HIS HIRE.

A stranger got off the street car, and accosting a newsboy, asked him to direct him to the nearest bank.

"This way," said the newsie, and turning the corner, pointed to a sky-scraper just across the street.

"Thank you, and what do I owe you?" said the gentleman, pulling a penny out of his pocket.

"A quarter, please."

"A quarter! Isn't that pretty high for directing a man to the bank?"

"You'll find, sir," said the youngster, "that bank directors are paid high in Chicago."—Chicago Tribune.

We would call attention to the well-known pharmaceutical preparations of E. J. Hart & Co., of New Orleans. They (the oldest manufacturing pharmaceutical house in the South) place their products with the profession upon their merits. It is only three months ago that each physician in Birmingham received an eight-ounce bottle (original) of Hart's Alimentary Elixir, a true liquid food—high in percentage of peptonoids, being quite different from foreign products which are mostly alcohol, nothing more or less than stimulants.

Hart's Bismuth Cream is the remedy in all stomatic troubles. If you are not acquainted with these specialties, write them for samples. COSTS YOU NOTHING.

OLDEST PHYSICIAN.

The oldest duly qualified physician in the world resides at Carlsbad in the person of Gallus Ritter von Hochberger, M. D., imperial and royal counselor at the Austrian court. He was born in 1802, and therefore is ninety-seven years old.

ABDOMINAL RELAXATION A PROFITABLE FACTOR IN THE PATHOGENESIS OF GALL-STONES.

J. S. Meyer (St. Louis Medical Review, Dec. 5, 1900,) says that visceral ptosis consequent upon abdominal relaxation and other causes results in stagnation of the bile through interfering with its normal expulsion.

The inactivity of the gall-bladder and stagnation of the bile predispose the mucous membrane to infection.

This infection may be either hematogenic, through the portal system, etc., or an ascending infection from the duodenum.

This results in a catarrhal inflammation of the mucous membrane, an albuminous exudate, and the exfoliation of epithelial cells. (According to Naunyn, the addition of albumin to the bile produces a copious precipitation of the stone-forming elements.)

This precipitate, with clumped bacteria and degenerated cell masses as nuclei, forms biliary calculi.

SANMETTO IN PROSTATIC AND BLADDER DISEASES.

I have used Sanmetto in my practice for several years and believe it to be a preparation of more than ordinary merit for the cure of prostatic and bladder diseases. The ethical manner in which it is put before the profession allows the physician to prescribe it, without fear of its use by the laity, in all cases where it is indicated.

R. D. Mason, M. D.,

Prof. of Rectal and Pelvic Surg. in Creighton Med. Col.; Surg. to St. Joseph Hospital.

Omaha, Neb.

MAL-ASSIMILATION.

I have prescribed Seng for indigestion and mal-assimilation and find the improvement marked from the beginning of its administration. I have prescribed it very successfully in a number of cases. Whenever I meet the two above conditions I never fail to use it.

J. H. Lawrence, M. D.,

Smithfield, Va.

Touro Infirmary.

New Orleans, La., October 1, 1900.

J. C. Perine, M. D.,

With E. J. Hart & Co., Limited:

Dear Doctor—I have used Bismuth Cream (Hart's) in gastritis and pyrosis with marked benefit, and recommend it to the profession.

(Signed)

Wm. Kohlman, M. D.

Society Reports.

JEFFERSON COUNTY MEDICAL SOCIETY.

DR. W. E. B. DAVIS, PRESIDENT IN THE CHAIR, DR. EDGAR A. JONES, SECRETARY.

At the regular meeting of the Jefferson County Medical Society, February 25, 1901, Dr. L. C. Morris read an interesting paper on "Cæsarean section as an Elective Operation, With Report of Case."

The paper covered the indications for Cæsarean section quite fully. It discussed extensively on the great necessity for pelvimetry in all primiparæ, also in multiparæ who had had previous difficult labors. By this means many cases might come as elective operations, instead of falling into the class of urgent ones, or of craniotomies. The essayist believes that Cæsarean section (elective) is a safer operation than symphseotomy.

Case: Primipara; age 19; negro; in labor 18 hours; complete atresia of upper end of vagina, due to attempts to produce abortion by means of strong nitric acid. The pains had been, and were still good. After a hurried preparation the woman was operated on under chloroform anæsthesia. The uterus was not removed from abdominal cavity, and after the escape of the amniotic fluid (through uterine incision) an assistant controlled hemorrhage by manual compression of the uterine arteries. An opening was made from uterus into vagina, and gauze passed through same. Uterine incision closed by interrupted silk sutures, in different layers, as was also abdominal incision. The woman did well for several days, then had slight elevation of temperature for eighteen days, after which time a stitch abscess opened through abdominal incision from uterine wall. After this, patient made an uninterrupted recovery. The child is doing well.—(See paper in this issue of Journal, page 179.—Ed.)

Discussion.—Dr. B. G. Copeland mentioned a case of Cæsarean section which he had performed two or three years before—an elective operation in a multipara. The uterus was removed from abdominal cavity and packed around with gauze. The mother and child both did well. Dr. Copeland urges Cæsarean section as preferable in all cases of impossible normal delivery, to any other operative procedure.

Dr. D. F. Talley reported a case of urgency which he had seen in the Charity Hospital, New Orleans. Woman was in moribund condition, and died shortly after leaving table. The child was dead before operation.

Dr. Carlyle K. Yates cited a case seen by him at Maryland General

Hospital, Baltimore. III-para, in labor eighteen hours. Diagnosed as uterus duplex. Previous deliveries had been easy. Conception occurred at this time, however, in a malformed uterus. This was removed, with its tube and ovary, at operation.

Dr. F. A. Lupton urged great need of accurate mensuration and pelvimetry in all primiparæ. He spoke of frequent occurrence of contracted pelvis in negroes.

In closing, Dr. Morris made the point that the best time for operation was at term, irrespective of labor. He said that 20 per cent. of all negro women have contracted pelves.

Dr. G. C. Chapman read a paper on "Granular Urethritis in Women," in which he gave history and treatment of fourteen cases occurring in his practice. In his opinion, the majority of these cases are due, not to gonorrhea, but to infection or irritation from leucorrheal discharges, highly concentrated urine, etc. He urged necessity of cystoscopy and endoscopy in all these cases to determine exact location and extent of disease. Treatment was usually: Local application, after dilation of urethra, of nitrate of silver, 5-80 grains to ounce, every four or five days. Iodized phenol was sometimes used instead of silver. All his cases were either completely cured, or greatly improved.

Discussion.—Dr. L. C. Morris said that many of these cases were due to gonorrhea.

Dr. B. A. Fox urged use of cystoscope in diagnosis of these cases, also free use of Lithia water.

Dr. H. N. Rosser asked about concentration, acidity, etc., of the urine.

Dr. W. P. McAdory had never used more than 5 grains of silver nitrate to ounce. The urine should best be rendered bland and non-irritating by administration of some drug before the applications.

Dr. J. D. Gibson advises free use of lithia water in all these cases:

Dr. Mack Rogers believes that frequent micturation occurred only in those cases where there was a complicating cystitis. The dilation does more than the applications.

Closing, Dr. Chapman said that several of his cases had been examined for gonococci, but they were uniformly absent. Symptoms of cystitis undoubtedly occur in those cases where the granulations are high in urethra.

REPORT OF CASES.

Dr. B. A. Fox reported case of ectopic gestation: Woman six weeks pregnant; all signs of hemorrhage; abdomen was opened and found full of blood; tube and ovary on affected side was removed. Recovery.

Abstracts.

Coughs: Their Suppression and Cure.

By Dr. Louis De Lorne, of New York City.

The treatment of coughs in general has always been varied and unsatisfactory. In the science of medicine there has ever been the difficulty to find a good remedy to relieve pain and distress in many phases of chest troubles, and particularly in coughs of bronchitis, pneumonia and phthisis.

With all of the numerous remedies of the *materia medica*, though each has had some practical value, there has always been the disadvantage of some unpleasant therapeutic effect following their use.

Stomach disturbances, constipation, stagnation of the secretions, increased temperature, diminished expectoration, excessive narcotic effect, the danger of habituation, etc., etc., are some of the complications experienced, and more especially are these conditions to be expected after the administration of codeine or morphine.

Furthermore, even admitting the value of codeine or morphine (with their undesirable after-effects) in certain cases, how often do they utterly fail to mitigate the coughs of phthisis, bronchitis and whooping cough, and also prove their absolute uselessness in laryngitis, asthma, etc.?

How especially important is it to have an efficient remedy for the cough of phthisis pulmonalis, which would not cause the disagreeable stagnation of secretory products of the lungs, that would not weaken the respiratory apparatus nor have any deleterious effect on the heart.

Surely the profession has long felt the need of something to replace the various opiates for the suppression and cure of coughs, something that should be superior, more reliable and safer. A remedy that would not only be efficient, but safe for the treatment of the sympathetic cough of pregnancy. A remedy that can be used where heart complications occur. A remedy that will promptly check incessant, hacking cough, and paroxysmal coughs, which rob the patient of rest and sleep.

Doubtless a remedy proving unusually meritorious in treating these various forms of coughs, and one which would be free from the unpleasant characteristics of morphine and codeine, will be of much interest to my colleagues and of much importance to the profession of medicine. With this fact in view I have concluded to submit the notes of a few cases to show the exceptional good results obtained

with a product recently introduced to the physician for his consideration.

I, like most physicians, look with the greatest skepticism on the ever-appearing articles on new remedies, and would not now have the opportunity to express my present satisfaction, if I had not been repeatedly urged by some of my confreres to try this new preparation in a few cases that were then giving me the greatest trouble.

The complete clinical reports of Prof. Morris Manges, of the Mt. Sinai Hospital of New York; Dr. W. Freudenthal, of New York; Dr. B. Turnauer (Weiner Medizinische Presse, No. 12, 1899); Dr. A. E. Beketoff (Klinische Therapeutische Wochenschrift, No. 14, 1899), following their investigation with heroin, I find to coincide with the results I have experienced with glyco-heroin (Smith), but I would here impress upon those interested that my entire investigations were made with glyco-heroin (Smith) only, excepting the few instances where I tried tablet triturates, and found them decidedly unsatisfactory.

Without doubt the merit of this preparation is to be attributed to its excellent composition, viz: heroin, one-sixteenth grain; ammon. hypophosphite, three grains; hyoscyamus, one grain; white pine bark, three and one-half grains; balsam tulu, one-quarter grain, and glycerine sufficient to make one dram, wherein the therapeutic properties, if the drugs are properly compounded, and which is evidenced in this preparation, will be acknowledged desirable by every physician. Here I would point out the special advantage that this preparation possesses over heroin in any other form, viz: the unnecessary administration of other remedies, while your patient is being treated with glyco-heroin (Smith), wherein you not only get the palliative effect of heroin, but have an admirable combination of remedies to bring about absolute cure in most cases. On account of the absence of syrup, instead of which glycerine, with its solvent and medicinal qualities, is used, there is not experienced the usual derangement of the stomach following the administration of preparations containing sugar or syrup.

The addition of ammonia hypophosphite also appealed to me, for its superiority as an expectorant over other like remedies is an established fact and must add much to its therapeutic value.

From the white pine bark contained therein, the astringency of which is, no doubt, modified through the soothing effect of glycerine, I found a very beneficial effect on the mucous membranes, thereby proving this also a valuable and desirable addition.

If, with our knowledge of the superiority of heroin as a sedative, we closely scrutinize the formula of this preparation, we should not fail to observe the efficiency of this combination, the therapeutic value of

which has been proved by careful physiological experiments in the laboratory with accurate observation on its therapeutic action before being introduced to the medical profession, whose demands upon a new remedy, before permitting its admission to a permanent place in the *materia medica*, are at the present time much more exacting than in the days of empirical pharmacy.

Believing that the individual results observed in a vast number of cases following the clinical investigation of a remedy to be superfluous, I shall here give the records in only a few of the cases in which I have tested glyco-heroin (Smith), and which are as follows:

1.—George N.; a case of pulmonary tuberculosis. The patient, who had been unable to sleep except in a sitting position, suffered from a violent cough, with a great deal of expectoration and dyspnoea. Respiration, 32; temperature in the afternoon, 103° ; pulse, 120. The paroxysms of coughing were very violent, one following another in rapid succession. He had been given codeine and morphine, but the cough and other symptoms persisted. Finally he was given a teaspoonful of glyco-heroin (Smith) (containing one-sixteenth grain of heroin) every three hours. That night he was able to lie down and sleep, only coughing twice during the night. After taking a teaspoonful every three or four hours for one week, his respirations were reduced to 26, temperature $101\frac{1}{2}^{\circ}$ in afternoon, pulse 98. He said he had not coughed more than a dozen times during the entire week, his night-sweats had been very much diminished, appetite improved.

2.—Mrs. S.; has been confined to her bed with a severe case of la grippe for two weeks. On recovery she suffered with a persisting and harassing cough. Various narcotics and expectorants were administered, but afforded no relief. One teaspoonful of glyco-heroin (Smith) was given every two hours. She obtained relief after taking the first dose. The next day she took one teaspoonful three times a day. At the end of the fourth day the cough had left her. The only unpleasant effect was she complained of being drowsy the first day.

3.—Joseph S., sixty years old. Had suffered since 1895 from chronic bronchitis. Had a violent cough, could not sleep nights. There was no emphysema in this case. He was placed on the following treatment: Potassium iodide, five grains three times daily, and glyco-heroin (Smith), one teaspoonful every three hours, the first week. After that the glyco-heroin (Smith) only was given three times a day. This case ended in complete recovery.

4.—A case of whooping-cough in a child eight years old, who had sixty or seventy paroxysms daily. Glyco-heroin (Smith) in twenty-minim doses every four hours soon reduced the paroxysms to between

twenty and thirty daily, and the violence of the paroxysms was very much abated.

5.—The three children of Mrs. C. had whooping-cough; the baby, one year old, suffered very much; the paroxysms were very violent. In this case the results were very good and almost instantaneous; after the second dose of glyco-heroin (Smith) the violence and frequency of the paroxysms abated; the child made a quick recovery. The other two children had very mild attacks, which I believe was also due to the glyco-heroin (Smith) administered.

6.—E. D., sixty-three years old, had suffered for the past four years with chronic bronchitis; while being free from cough all summer, it seemed to increase in severity each winter, and he dreaded the return of the cold weather. I was called in September 28th and found him suffering with a violent cough and a great deal of dyspnoea. With the aid of glyco-heroin (Smith) I have stopped the cough; he has not taken any of the glyco-heroin (Smith) since October 23d, and there has been no return of the cough. His present condition shows a complete cure.

In all tuberculous cases the cough diminished until practically absent, patients slept better, appetite increased, gained in weight, and the temperature reduced to about normal.

In several cases of whooping-cough where other remedies had been tried in order to relieve the paroxysms of coughing without result, with the use of glyco-heroin (Smith) the results were all that could be expected, as there was decided relief from the paroxysms of coughing, and all were able to sleep and rest well.

In acute bronchitis glyco-heroin (Smith) acted very promptly, and not alone was the cough relieved in a very short time, but also the whole general condition of the patient was rapidly improved.

In chronic bronchitis the preparation is very serviceable. The expectoration is facilitated and the dyspnoea diminished, owing to the fact that the air enters more completely into the alveoli in consequence of the increased inspiratory force.

In bronchitis the results were also satisfactory. If the precaution of lowering the upper part of the body was observed to aid the patient to get rid of much of the accumulative secretions by gravity, a few small doses of glyco-heroin (Smith) during the day and a full dose at bedtime would always make the patient very comfortable.

In pulmonary emphysema and bronchial asthma glyco-heroin (Smith) is decidedly superior to any other remedy therefor used.

During the attack of asthma, with the administration of this remedy respiration is stimulated, and the individual paroxysms were not only shortened, but the interval between the attacks is distinctly lengthened.

In acute pneumonia the results were very gratifying, since in most of the cases the harassing cough was speedily controlled and the patient's comfort was increased as well by the stimulation of the respiration, the dyspnœa becoming much less marked.

And now, summing up all data of the clinical investigations carried on under my observation, I must say that we have here acquired a reliable, prompt and effective remedy with the following advantages:

A reduction of temperature.

Prolonging respiration and at the same time increasing the volume of each inspiration.

Almost devoid of hypnotic effect.

Absence of danger of acquiring the habit.

It does not weaken the respiratory apparatus.

Does not cause unpleasant disturbances of the stomach or intestines.

Is without deleterious effect on the heart.

The ratio of therapeutic to the toxic dose is many times smaller than that of morphine or codeine.

Its decided beneficial effect in all dyspnœa.

It does not constipate, or rarely, and then only slightly.

Acts as a stimulant to the respiratory center, and stagnation of the secretions is excluded.

And in comparative doses with codeine, the latter is shown to produce nausea and vertigo, while these symptoms are absent during the administration of glyco-heroin (Smith).

In conclusion, I would say that in all cases here cited, and many others as well, the instant relief obtained marveled both myself and patients. I have never, with any remedy for similar indications, enjoyed the confidence I have in this preparation, and now have the pleasure in not only having offered relief and cure in the cases wherein this remedy was first suggested, but find glyco-heroin (Smith) almost indispensable; and more especially so when I again consider codeine or morphine, with all their bad effects, as remedies compared with this preparation, which, on investigation, I found to be not only a true pharmaceutical product, but also an ethical product in every sense that the physician applies this term in designating a medicinal preparation worthy of consideration by the medical profession, and for this reason I have no hesitancy in giving my experience with the same, but rather feel that any treatment of disease that proves of especial merit should always be brought to the notice of the profession.

The preparation is well worth investigating, and will surely prove a valuable addition to the "armamentarium" of every physician.—Interstate Med. Journal.

Etiology of Yellow Fever.

Some months ago we called attention to the observations on the etiology of yellow fever made by Drs. Reed, Carroll, Agramonte and Lazear, the last of whom lost his life while pursuing the investigations. According to these earlier experiments, it was rather satisfactorily demonstrated that yellow fever could be communicated through the agency of the mosquito, namely, the *Culex fasciatus*.

A further report has been made by these investigators in a paper read before the Pan-American Congress at its recent meeting. The observations were made in Camp Lazear (named after their lamented co-laborer), a hospital station purposely located in an open field one mile from Quemados, Cuba, under the direction of Acting Assistant and Surgeon Dr. Roger P. Ames.

The wards were especially constructed to carry out the scientific experiments regarding the etiology of yellow fever by proper isolation and elimination of all possible sources of error. Six non-immunes, all young men in good general physical condition, were selected for experimentation, and none of these was subjected to inoculation who had not passed the full period of incubation of yellow fever in this camp. All subjects, of course, gave their full consent.

Mosquitoes that had on different days bitten undoubted cases of yellow fever were allowed to bite once or several times the subjects for experimentation. No effect whatever was produced by the bite of fourteen mosquitoes at intervals of two, three, four, five, six, nine and eleven days after contamination of the insect with the blood of well-marked cases of yellow fever early in the disease. On the seventeenth day after contamination, however, the bite of four of these mosquitoes (all that remained of the original fourteen) was promptly followed by an attack of yellow fever in those bitten individuals. These observations would seem to indicate that after the parasite had been taken into the stomach of the mosquito, a certain number of days must elapse before the insect is capable of reconveying it to man. This period doubtless represents the time required for the parasite to pass from the insect's stomach to its salivary glands. These observations show further that an individual may be bitten on three or more occasions without manifesting any symptoms of disturbance of health, yet promptly sicken with yellow fever within a few days after being bitten by an insect capable of conveying the infection.

Blood taken from the general circulation of a patient with yellow fever was injected into four individuals, with one negative and three positive results. In this particular negative case bites by contaminated mosquitoes also proved negative, on account of which the conclusion was drawn that it was one possessing a natural immunity to yellow fever.

To test the almost universally prevalent idea that the clothing, bedding, linen, etc., of yellow fever patients is a most potent factor in carrying the disease, three non-immune physicians were placed in a room thoroughly screened to prevent the entrance of mosquitoes and fresh air; sunlight was excluded and the most unhygienic environment promoted. These physicians purposely unpacked and handled daily in this room many boxes of bed linen and clothing, stools, saliva, etc., of fatal cases of yellow fever from the hospitals of Havana. These soiled articles were, moreover, hung in the room and about the beds of the physicians. They all remained perfectly healthy during a stay of twenty nights in this room, nor did they afterwards develop the disease. At a late period two non-immune Americans occupied this same room, wearing the clothing and using the bedding, very much soiled by yellow fever patients. Their pillows were covered with the blood drawn from the general and capillary circulation of yellow fever cases on the first day of the disease. Notwithstanding this exposure, lasting fourteen days, both remained in perfect health.

To determine the question, how does a house become infected with yellow fever? another building was erected, known as the "Infected Mosquito Building." All articles admitted to this building were first submitted to a careful disinfection by steam to avoid all danger of outside source of infection. A non-immune was placed in this building, and was bitten by several contaminated mosquitoes. One of these insects had bitten a severe case of yellow fever twenty-four days previously, and three others twelve days previously. On the fourth day this patient complained of the symptoms of yellow fever, and a positive diagnosis of the same was made by a board of experts. Two non-immune subjects slept in this same room for eight nights, but they were protected from the mosquitoes by a wire screen. Up to the present time they have been in perfect health. A few days later the room was entered by a non-immune. He remained twenty-five minutes and was bitten by only one contaminated mosquito. On the following day he remained fifteen minutes, and was bitten by but one insect. The result was negative, but it must be said that he may have been bitten by mosquitoes but thirteen days after their contamination, as a number of the insects died, and among these were probably the older ones.

The following conclusions are drawn:

1. The mosquito—*Culex fasciatus*—serves as the intermediate host for the parasite of yellow fever.
2. Yellow fever is transmitted to the non-immune individual by means of the bite of the mosquito that has previously fed on the blood of those sick with this disease.
3. An interval of about twelve days or more before the mosquito is capable of conveying the infection.

4. The bite of the mosquito at an earlier period after contamination does not appear to confer any immunity against a subsequent attack.

5. Yellow fever can also be experimentally produced by the subcutaneous injection of blood taken from the general circulation during the first and second days of this disease.

6. An attack of yellow fever, produced by the bite of the mosquito, confers immunity against the subsequent injection of the blood of an individual suffering from the non-experimental form of this disease.

7. The period of incubation in thirteen cases of experimental yellow fever has varied from forty-one hours to five days and seventeen hours.

8. Yellow fever is not conveyed by fomites, and hence disinfection of articles of clothing, bedding or merchandise, supposedly contaminated by contact with those sick with this disease, is unnecessary.

9. A house may be said to be infected with yellow fever only when there are present within its walls contaminated mosquitoes capable of conveying the parasite of this disease.

10. The spread of yellow fever can be most effectually controlled by measures directed to the destruction of mosquitoes and the protection of the sick against the bites of these insects.

11. While the mode of propagation of yellow fever has now been definitely determined, the specific cause of the disease remains to be discovered.

On the whole, it will be readily admitted that these experiments reflect great credit upon those conducting them, as well as upon those who were courageous and philanthropic enough in the cause of humanity to subject themselves to a disease which always carries with it great discomfort, and which often results in death. The eradication of yellow fever, if there be no other means of acquirement, resolves itself merely in the destruction of the *Culex fasciatus* or in the prevention of its bite.—St. Louis Medical Review.

Recent Views Concerning the Genesis of Carcinoma.

Ribbert's opinions as to the early participation of the underlying connective tissue in the development of carcinoma have been the subject of a severe arraignment by Lohmer. For a considerable period, chiefly through the work of Thiersch and Waldeyer, the origin as well as the further growth of carcinoma was held to be directly due to the proliferation of the epithelium into the deeper tissues. Ribbert and his pupils diverged from this conception in that they traced the origin of the tumor to a disconnection of the epithelial cells from their associates by processes in the subepithelial connective tissue; following

such dislocations, the loosened cells proliferated to form a tumor. Such severances are, according to Ribbert, produced by the growth of the connective tissue into the epithelium, by the lengthening of the papillæ of the corium so that the interpapillary epithelial pegs become correspondingly drawn out and ultimately separated, and by the pushing outward of the epithelium en masse by the increased amount of tissue in the corium. There is no doubt that Ribbert's theories have been of great service in stimulating study of the dynamics of the process; nor is there any question but that they minimize, to insignificance, the important change in the epithelium whereby the cells proliferate and undergo the marked morphologic alterations that Hauser and others believe to be the visible signs of altered biologic conditions. Lohmer, in a careful study of serial sections of eight carcinomas of the lip, of carcinomas that originated in sebaceous glands and hair follicles, in the mammary gland, penis, forehead, nose, tongue, pancreas, and different parts of the gastro-intestinal tract, has failed entirely to find adequate historical evidence to support the views of Ribbert. He was able to prove that certain cases originated solely by the proliferation of the epithelium inward, that elongation of the interpapillary epithelium in many cases was absent, that on the border of glandular carcinomas, the new glands are produced by the proliferation of pre-existing glands, and, what is still more interesting, he was able to find in some carcinomas that two or more entirely independent foci of proliferation were present. He is forced to the conclusion that we must return to the former views of Thiersch and Waldeyer, that the multiplication of the epithelial cells is alone responsible for these growths.

The reasons for the increased proliferative energy of the cells whose end product is a tumor have been theoretically assumed, by Brosch, to be due to a double stimulus. He believes that the initiatory changes are reparative in nature, and that when these are unable to restore the damaged parts the added energy causes them to multiply still further and to produce such an amount of new tissue that tumors are formed. He distinguishes two forms of proliferation, that called forth in the response of the tissue to injury—essentially teleologic—and such as occurs in tumors. The proliferation of cells in consequence of physiologic waste and wear, he would designate by the name regeneration. Upon this assumption he has made careful re-examination of Lowenthal's tables and finds that in many cases injury to parts in which reparative processes were already commenced has caused tumors; the second injury has been sufficient to supply the stimulus necessary to cause proliferation that far oversteps the requirements. Many cases of carcinoma that develop in the cicatrices of burns belong to this category. In some cases in which a positive history of previous trauma

was lacking, the defect was filled by careful inquiry into the occupation and habits of the individual. He quite correctly calls attention to the impossibility of obtaining positive information about the traumatic injuries to the surface of the gastro-intestinal canal—situations where trivial harm is fully as important as extensive injuries upon the outer surface.

There is much that is interesting and attractive about the theoretical axiom erected by Brosch of trauma-proliferation, trauma-tumor, and one of the most valuable supports to this view is afforded by the occurrence of malignant growths following trauma of benign tumors. He attributes the repeated failure of previous investigators to produce tumors by implantation experiments to the absence of certain factors in the causal chain, and to the necessity of experimentation upon a productive process that has already been established. Upon this basis he bruised the skin of the back of a guinea-pig and, after a granulating wound had formed, rubbed it at intervals with a solution of paraffin in xylol; after some weeks a very characteristic ulcer was produced, resembling the cerebral convolutions in miniature; the elevations in the floor of the ulcer were caused by an atypical epithelial growth that in all respects resembled an early carcinoma. The experiments have not as yet been conducted to the end that regional and general metastatic growths are reported. It will be noted that these two important contributions to the subject of tumor genesis do not necessarily conflict with the parasite theories of tumors.—*Journal of Am. Med. Assn.*

Rheumatic Fever in Children and the Prevention of Cardiac Complications.

A strong argument in favor of the infectious nature of acute rheumatic fever is its behavior in children. As Heiman has pointed out in a recent paper (*Archives of Pediatrics*, January, 1901), the liability to joint involvement in children is reduced to a minimum, and, in certain cases, growing pains may be the only subjective symptom complained of. On the other hand, in the little folks, there is great danger of involvement of other tissues, particularly of the serous membranes, such as the endocardium. A short time ago Barbier and Tollemer reported to the *Société de Pédiatrie* (*Revue Mensuelle des Maladies de l'Enfance*, January, 1901) the case of a little girl aged 11 years, who was suffering from an acute polyarthrititis of 18 days' duration. This child was suddenly seized with aphasia and right-sided hemiplegia. After several days she died, and, at autopsy, a vegetating endocarditis of the mitral valve and multiple emboli in the cerebral artery were discovered. Realizing the danger of involvement of the serous membranes we should first place our patients under the most favorable conditions

for the prevention of such a complication and then be on the lookout constantly for the first signs of endocardial mischief, so as to cure the lesion, if possible, before it becomes chronic. Caton ("The Prevention of Valvular Diseases of the Heart," London, 1900) has worked on this problem for 19 years, and, in his book, gives the results of his studies and notes of 86 cases in which his method has been attended with a greater or less degree of success. For the prevention and cure of endocardial lesions this author has adopted the following method: His patients are clad in flannel nightgowns. They are kept in bed so as to secure complete physiological rest of mind and body, thereby reducing the demand made upon the heart to the physiological minimum. Pain is relieved by the salicylates. Small blisters are applied over the upper portion of the chest. These act in reality as direct stimulants to the vasomotor and trophic nerves of the ailing part. He exhibits the iodides and mercury as absorbents, and these drugs together with the salicylates are kept up for three or four weeks, or longer, if necessary, after the acute symptoms have subsided. He believes that those drugs that act directly and specifically on the heart, the so-called cardiac tonics, including digitalis and caffeine, are distinctly injurious. Heiman, in order to prevent the occurrence of endocarditis, gives from three to five grains of salicylate for one week of each month for a year or more after the acute symptoms have disappeared.

We believe that the strontium salt is the best form of the salicylates because it is the least likely to disagree with the stomach.

Caton emphasizes the fact that the mitral valve is affected much more frequently than the aortic—at least ten times as frequently in his experience. He explains this by the mechanical principles involved at the time of the mitral valve during each systole of the heart. At this moment intracardial pressure is immensely increased, and when the cusps come together they have to withstand this pressure. These cusps are nourished and repaired through connective-tissue channels, no blood vessels existing nearer than the attached margins of the cusps. Under the strain and defective nutrition the infecting agent attacks the valves at their most vulnerable points. Counter-irritation, he thinks, acts by influencing nutrition through the nervous system.—Philadelphia Med. Journal.

Urinary Examination a Duty.

Too many physicians are culpably careless with regard to urinary examinations. Some are not trained sufficiently to do the work properly, and thus ignore it except in severe cases, when they are dependent upon some one who makes a specialty of doing such work. Others

have the required skill, but are not properly equipped. Others have the equipment and the skill, but are too busy or too lazy to do the work.

Doubtless many a case of severe kidney trouble might have been saved if properly attended in time. One sees occasional cases which have been diagnosed as "Bright's disease," and doped and drugged unmercifully, live for years, or recover entirely.

These actual conditions are a sad commentary on the honesty of medical men. It is the duty of every medical man to perfect himself in the examination of urin and to practice it conscientiously. Every case with any obscure symptoms or which does not readily yield to treatment, should have the benefit of a thorough examination of the urin. We could never understand how some medical men, otherwise honest, could look at a bottle of urin, shake it, or perhaps make the litmus paper test, possibly take the specific gravity, and then assure the patient that the kidneys were all right.

There is a responsibility connected with making a diagnosis which some physicians ignore. The patient is trusting you when he applies to you; he is paying you for the best knowledge and skill of which you are capable; his life may be in the balance and neglect or careless ignorance on your part may condemn him to the grave; and if his illness has not had proper attention at your hands you may tremble when he dies. It is strange that this important subject is so neglected. A few dollars will equip one with apparatus, and but little space is required for the instruments. Only a few moments are required to make a thorough and capable examination of the urin in most cases. It is some trouble, certainly, but you are getting paid for it.

One reason why practitioners make so few urinary examinations is that they have permitted the patient to understand that "urinary examination" consists in the above mentioned farcical procedure, and is not to be charged for. Thus they dread making an honest examination, which will entail time, expense and trouble, which they fear they could not obtain remuneration for. It is always wise to be honest. When you believe the interests of the patient require a urinary examination, tell him so, and explain that the time and skill required necessitate an extra charge for such service. Then if you charge a fair fee for it, you are bound by every rule of law and ethics to make a careful and thorough examination.

We know of one young practitioner who made a path to success by the careful urinary examinations he made. He permitted the patients to watch the manipulations, and thus gained their confidence. When they saw the pains he took with them, they felt they were in good hands, and trusted him and stood by him afterwards. The information he obtained from such examinations gave him insight into "obscure"

cases, and his treatment was more successful than that of his predecessors who had not time to make urinary examinations, or who had the experience (?) which qualified them to dispense with such "formalities."

While we are confident that it will pay, we would not urge the business side of the proposition; but we insist that no man can be an honest physician unless he be prepared to make urinary examinations with accuracy, and do it habitually in all cases which might possibly need it. The more honestly a doctor acts, the better physician he becomes. And no man can be either an honest or capable practitioner unless he give due attention to urinary examination.—*Medical World*.

Subarachnoid Cocainization.

Subarachnoid cocainization has been personally used in twenty-one cases. Fourteen of these cases were obstetrical and seven gynaecological.

Concerning the technique of operation, the important points are—

1. Surgical cleanliness in all things, and a fresh, aseptic solution of cocaine, full strength. The method of sterilization used at the present time is to raise the temperature of the solution (in small bottles) to 80° C. for one hour on two successive days.

2. The needle need not be longer than seven centimetres and should be kept sharpened.

3. The nurse should stand at patient's head when the puncture is made to keep the back arched forward. A case was recently reported of a patient suddenly sitting upright and breaking the needle.

4. During an operation the patient's ears should be kept closed with cotton and the eyes covered with a towel or cloth.

The results, as far as they go, would tend to support the view that spinal anaesthesia is not very dangerous, except perhaps to the child in utero. When it produces disagreeable symptoms, they are usually transient. In the labor cases it usually retarded progress. Finally, the anaesthesia it produces is for a fairly definite period of time without affecting consciousness and with full control of the voluntary muscles.

From a study of these cases the use of the lumbar puncture in multiparæ would seem to be less called for than inhalations of chloroform. The results obtained from its use in primiparæ were also not very encouraging, but when good results can be obtained in a few cases the experiments should be continued.

In instrumental deliveries, when urgency is required and the patient is not of a very nervous temperament, the spinal narcosis seems to meet every indication. The delivery would be much facilitated by the

patient's aid, which is not obtained under general narcosis, and the dangers of retained placenta and post-partum hemorrhages are lessened.

It is doubtful if the puncture will ever replace general narcosis in abdominal operations. In vaginal cœliotomy and minor gynæcological work it seems to have its greatest field of usefulness, and will, it is believed, come more in vogue as its merits are more fully observed and understood.—N. J. Hawley and F. J. Taussig (Med. Record, Jan. 19, 1901).

Medical Anarchy in Texas.

The fact that a Texas decision made all diplomas of whatever character qualifications for practice, has already been noticed in The Journal. This places Texas in about the lowest grade among the States, but it seems still lower depths can be reached. The Texas Medical News for January publishes a letter, received by a medical student in Galveston, in which the writer says he has a friend on one of the State boards of medical examiners who informs him "that one of the other State boards is clandestinely advertising for applicants for license and assuring them of same if they will only appear before said board. And because of this, this friend of mine says to me: 'You offer license to any worthy and competent young man that you may find and I will furnish same.' So, doctor, if you desire a permanent State license for the practice of medicine and are willing to pay \$25 for them, why, you can write me." The writer goes on to say that the offer is "no humbug, but good goods," that he is a regular practicing physician, etc., and to ask that it be treated confidentially and if a license is not wanted to have nothing said about it. As a commentary the Texas Medical Journal reproduces a clipping taken from the Dallas News of a recent date, giving an account of twenty-seven young medical students from a Memphis college, all Texans, passing the district medical examiners in Texarkana, some of whom returned to finish their studies while others proceeded at once to their homes to hang out their shingles without further preliminaries. A diploma mill of the Armstrong type has heretofore been our ideal of the extreme of degradation of medical qualifications, but a district examining board of Texas, appointed by the district judges, selling licenses to practice at \$15 to \$20 apiece, goes it one better. Between the quacks and their legal friends and sponsors there would seem to have been, up to date, pretty nearly medical anarchy in Texas. The medical practice act just passed (see Medical News column) was certainly badly needed.—Journal of Am. Med. Assn.

Glyco-Heroin (Smith) Compared with Codeine and Morphine,

Aside from the after-effects of morphine, such as nausea, general lassitude, vomiting and vertigo, it has the disadvantage that the patient becomes readily addicted to it and chronic morphinomania occurs, especially in neurotic persons.

Codeine in its physiologic action resembles narcotine, though the narcotic stage is not so much pronounced. When administered in small doses intestinal peristalsis is promoted, while in large doses it produces diarrhoea in consequence of complete relaxation of the intestinal muscles, owing to paralysis of the nerve centers governing the intestines.

The sedative action of Codeine is unreliable.

Expectoration is not promoted by morphine or Codeine, while Glyco-Heroin (Smith) acts as a stimulant to the respiratory center and stagnation of the secretions is excluded.

Ten times as much Heroin as Codeine is required to produce toxic effects.

Furthermore, ten times more by weight of Codeine than Heroin is required to produce the desired showing of respiration.

COMPARATIVE doses of Glyco-Heroin (Smith) and Codeine show the latter to produce nausea, vomiting and vertigo, while these symptoms are absent during the administration of Glyco-Heroin (Smith).

Unlike morphine⁹ preparations, GLYCO-HEROIN (SMITH) DOES NOT CONSTIPATE.

Dose.—The adult dose of Glyco-Heroin (Smith) is at all times one teaspoonful, which is repeated every two hours, or at longer intervals, as the case may require.

To children of ten or more years, give from a quarter to half a teaspoonful.

To children three or more years, give five to ten drops.

Notes.—Glyco-Heroin (Smith) is a dark amber liquid, perfectly clear, and has the density of C. P. glycerine.

Its odor and flavor is peculiarly aromatic and agreeable.

Its taste is aromatic sweet, with just a shade of bitter.

The size of package supplied to the druggists for dispensing purposes is sixteen ounces.

The quantity ordinarily prescribed by the physician is three or four ounces.

Congential Stridor of Infants.

Etiology.—The most important conclusions regarding the congenital stridor of infants may be stated as follows:

1. That the primary element in the causation of this condition is a disturbance of the co-ordination of the respiratory movements, prob-

ably due to some developmental backwardness of the cortical structures which control them.

2. That the change of form found is merely an exaggeration of the normal infantile type, and is mainly, if not entirely, the result of a constantly recurring sucking-in of the upper aperture of the soft larynx, which is induced by the ill co-ordinated and spasmodic nature of the breathing. That it is, in fact, an acquired deformity strictly analogous to pigeon-breast.

3. That there is no proof that any congenital malformation of the upper laryngeal aperture exists in these cases.

4. That the supposition of a congenital deformity is not essential to account for the symptoms, inasmuch as normal babies crow in a very similar manner when they are coming out of chloroform.

5. That the sounds are not produced in the pharynx. This is proved by the high-pitched phonic character of the crow, and also by the fact that the stridor persists, not only when the nostrils are closed, but equally when the mouth is occluded by the nipple, when the tongue is depressed by a spatula, and during yawning. That they are not produced in the trachea by compression exerted by a large thymus or enlarged lymphatic glands, we conclude on two grounds: First, because in none of the fatal cases of congenital stridor recorded have we seen enlargement of the thymus or lymphatic glands noted; and, secondly, because in two case which we have examined, in which compression of the trachea by enlarged bronchial glands was found after death, the symptoms were of a very different type. In these cases the stridor was mainly expiratory, the larynx did not move up and down with respiration, as it does in cases of intralaryngeal obstruction, and there was much greater respiratory distress. The stridor is probably produced partly in the larynx proper, and partly at the abnormally approximated ary-epiglottic folds.

6. That the neurosis causing the symptoms has not, in our experience, seemed to depend on the presence of adenoid growths or other obvious causes or reflex irritation.—John Thomson and A. L. Turner (Brit. Med. Jour., Dec. 1, 1900).

Annual Meeting of the Association of Medical Officers of the Army and Navy of the Confederacy.

The annual meeting of this association will be held in Memphis, Tenn., in connection with the annual re-union of the United Confederate Veterans, May 28th, 30th, prox.

The Committee of Arrangements have sent out the following circular letter:

Memphis, Tenn., March 1st, 1901.

Dear Doctor—The Association of Medical Officers of the Army and Navy of the Confederacy will convene in Memphis, Tenn., May 28-30, 1901, during the meeting of the Confederate Reunion. All surgeons, assistant surgeons, acting assistant surgeons, or contract physicians and hospital stewards in the Army and Navy of the Confederate States, and all regular physicians who served honorably in any capacity in the Confederate States Army and Navy, and all regular physicians who are sons of Confederate Veterans, are eligible to membership.

You are cordially invited to attend said meeting and contribute reports of important cases coming under your observation, and any reminiscences worthy of preservation connected with your service in the Army or Navy of the Confederacy.

If you desire to become a member of the association, and expect to attend the meeting next May, please fill out the enclosed blank and return the same to the secretary at once, in order that your name may appear on the roll.

G. B. Malone, M. D.,
Chairman,
281 Main St., Memphis, Tenn.

Respectfully,
A. L. Elcan, M. D.,
Secretary,
Southern Express Building,
Memphis, Tenn.

The enclosed blank alluded to contains space for name in full; time and place of enlistment; rank at time of enlistment; rank at close of war; character of service—army or navy; when and where surrendered; present address, and remarks.

Any further information desired will be most cheerfully furnished by Drs. Malone or Elcan, of Memphis, or Dr. Deering J. Roberts, Secretary of the Association, of Nashville, Tenn.

A recent visit to Memphis elicited the fact that nothing will be left undone to provide for the comfort, enjoyment and pleasure of the survivors of the late war between the States. Every man, woman and child in Memphis is fully enthused and thoroughly aroused, with a full determination that the occasion shall be both eventful and momentous to everyone who may be so fortunate as to attend.

The doctors of Memphis will see that their end of the line is fully kept up; and with a uniform railroad rate of one cent per mile over all Southern and Southeastern roads, the attendance should surely be a feature of the occasion.



THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY FOR 1901. A Yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from journals, monographs and text-books of the leading American and foreign authors and investigators. Arranged with critical editorial comments, by eminent American specialists. In two volumes—Volume I, including General Medicine, Octavo, 681 pages, illustrated; Volume II, General Surgery, Octavo, 610 pages, illustrated. Philadelphia and London: W. B. Sanders & Co. 1901. Per volume: Cloth, \$3.00 net; half morocco, \$3.75 net.

The issue of the Year-Book for 1900 in two volumes met with such general approval from the profession that the publishers decided to follow the same plan with the Year-Book for 1901. The arrangement has a two-fold advantage. To the physician who uses the entire book, it offers an increased amount of matter in the most convenient form for easy consultation, and without any increase in price; while specialists and others who want either the medical or the surgical section alone, secure the complete consideration of their branch at a nominal sum, without the necessity of purchasing considerable material for which they have no special use.

OBSTETRIC AND GYNECOLOGIC NURSING. By E. P. Davis, A. M., M. D., Professor of Obstetrics in Jefferson Medical College and Philadelphia Polyclinic. 12mo, volume of 402 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Co. 1901. Price, \$1.75 net.

This volume is designed to furnish instruction as to the various

duties of the obstetric and gynecologic nurse. Obstetric nursing demands some knowledge of natural pregnancy, and of the signs of accidents and diseases which may occur during pregnancy. It also requires knowledge and experience in the care of the patient during the labor and complete recovery, with the needs of her child. The obstetric nurse must also know how to help patient and doctor in the accidents and complications of labor, and has an important part to play in caring for mother and child in the diseases which occasionally attack them during the puerperal period. Gynecologic nursing requires special instruction and training, and a thorough knowledge and drill of asepsis and antisepsis are absolutely indispensable.

A CLINICAL TREATISE ON FRACTURES. By William Barton Hopkins, M. D., Surgeon to the Pennsylvania Hospital and to the Orthopedic Hospital and Infirmary for Nervous Diseases. Octavo, pp. 268. Illustrated. Philadelphia: J. B. Lippincott & Co. 1900.

A number of books have been published during the last two or three years on the subject of fractures, but no book has come to our notice which brings out more clearly the important points than the book of Prof. Hopkins.

The author, himself, is a master of his subject, and he has had great clinical experience at the Pennsylvania Hospital. He describes the injury and its management in each particular case in a concise manner, scarcely using a superfluous word. It is a work for the man of some experience rather than for the student. It is copiously illustrated with admirable skiagraphs and numerous other engravings, selected from the vast collection at the Pennsylvania Hospital and from the Mütter Museum of the College of Physicians.

It is printed on heavy plate paper, and is as handsome a specimen of book-making as has been seen in many a day.

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WILL BE MAILED TO YOUR ADDRESS, UPON APPLICATION.

We beg to announce that, in addition to the 14 oz. bottle, in which Listerine is offered to the trade, the pharmacist can now supply a smaller package, containing 3 fluid ounces, which is put up for the convenience of practitioners who prefer, upon certain occasions, to prescribe articles of established merit in the Original Package, under the seal and guarantee of the manufacturer.

FOR DISEASES OF THE URIC ACID DIATHESIS:

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The ascertained value of Hydrangea in Calculous Complaints and Abnormal Conditions of the Kidneys, through the earlier reports of Drs. Atlee, Horsley, Monkur, Butler and others, and the well-known utility of Lithia in diseases of the uric acid diathesis, at once justified the therapeutic claims of LAMBERT'S LITHIATED HYDRANGEA when first announced to the medical profession, whilst subsequent use and close clinical observation has caused it to be regarded by physicians generally as a very valuable Kidney Alternative and Antilithic agent in the treatment of

Urinary Calculus, Gout, Rheumatism, Cystitis, Diabetes, Hematuria, Bright's Disease, and Vesical Irritations Generally.

Realizing that in many of the diseases in which LAMBERT'S LITHIATED HYDRANGEA has been found to possess great therapeutic value, it is of the highest importance that suitable diet be employed, we have had prepared for the convenience of physicians,

DIETETIC NOTES,

suggesting the articles of food to be allowed or prohibited in several of these diseases. A book of these Dietetic Notes, each note perforated and convenient for the physician to detach and distribute to patients, supplied upon request, together with literature fully descriptive of LAMBERT'S LITHIATED HYDRANGEA.

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